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PlayStation ■ Saturn ■ Nintendo 64 ■ PC ■ Arcade ■ Net ■ Multimedia

The Lost World
Sega's ravenous Model 3 monster

GoldenEye
First review of N64 masterpiece

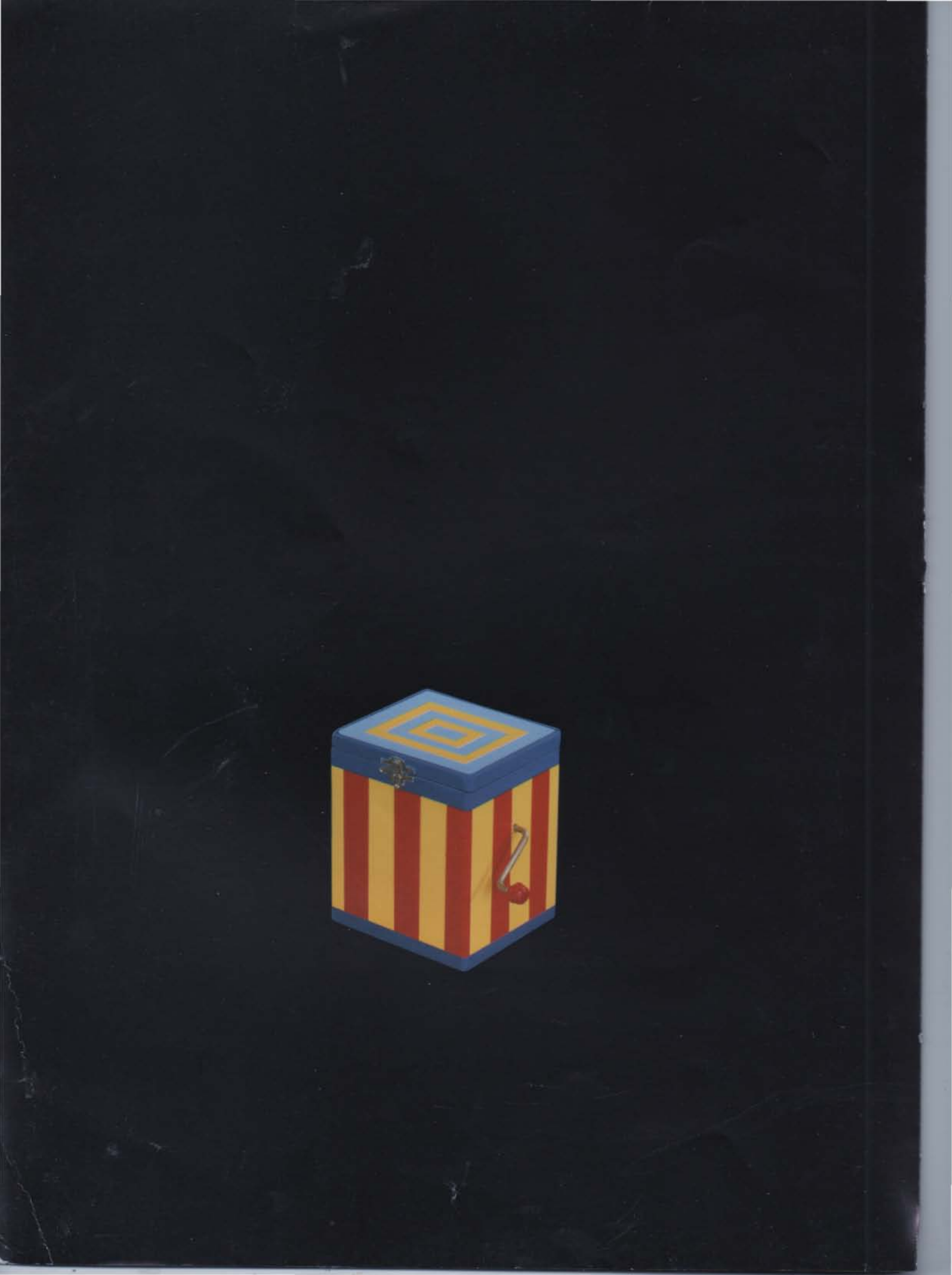
3Dfx
Edge meets the PC 3D miracle workers

E3
PC dominates Atlanta showcase



Despite a storyline roughly hewn around the weak plot of the blockbuster movie, Sega's Model 3-powered creation emerges as a milestone in coin-op CGI. Unlike Spielberg's set pieces, though, AM3's monsters move in realtime, setting a new benchmark for arcade visualisation

Issue forty-eight
Future
August
48





This month, **Edge** attended the first E3 event to be held in Atlanta, Georgia. The findings? A games industry commercially healthy with newly restored confidence, but creatively ailing with clones, sequels, and a startling dearth of originality.

The predominance of 3Dfx was a sure sign that the PC has, after a number of false starts, finally come of age as a games system – even with little more than follow-ups to last year's hits to show for 12 months' hard work.

But Nintendo looked as though it was already running short on ideas, despite healthy sales figures. Beautiful but blatant *Mario 64* clones were much in evidence, and only *GoldenEye* seemed to offer anything new. Even the PlayStation, which until very recently was lauded for saving the industry from seemingly terminal decline, seemed to be struggling under the weight of hundreds of substandard games.

And with the recent death of Matsushita's M2 project, and the continued decline of the Saturn in the face of increasingly fierce competition, could the videogame market, only recently seeming so buoyant, be on the verge of another downward spiral?

Peculiarities such as *Metal Gear*, *GoldenEye* and *Spec Ops* would suggest not. But come 1998, a year that promises yet more evolution with precious little revolution, such games may be the exception rather than the rule...

The future is almost here...

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The Lost World: Jurassic Park © Sega

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Holder of what is perhaps the hottest property in the entire entertainment industry, LucasArts is about to give 'Star Wars' fans more Jedi-related games to obsess over. **Edge** visited the company's HQ to see the Force in action.

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Ever since *Elite*'s star-spangled backdrops flickered across 8bit screens, gamers have pined for a more and more extravagant deep-space combat sims. **Edge** meets Particle Systems, whose *I-War* might be the most impressive yet.

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The Sega development division with the most diverse game catalogue of them all (*Sega Rally*, *GunBlade NY*, *Last Bronx*, etc) is about to unleash its most visually intense game to date. **Edge** talks to the team behind *The Lost World*.

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The structure of the entertainment software industry is undergoing a transformation, seeing star names such as Peter Molyneux up sticks and form their own independent development operations. An exclusive **Edge** investigation.

The Curse of Monkey Island



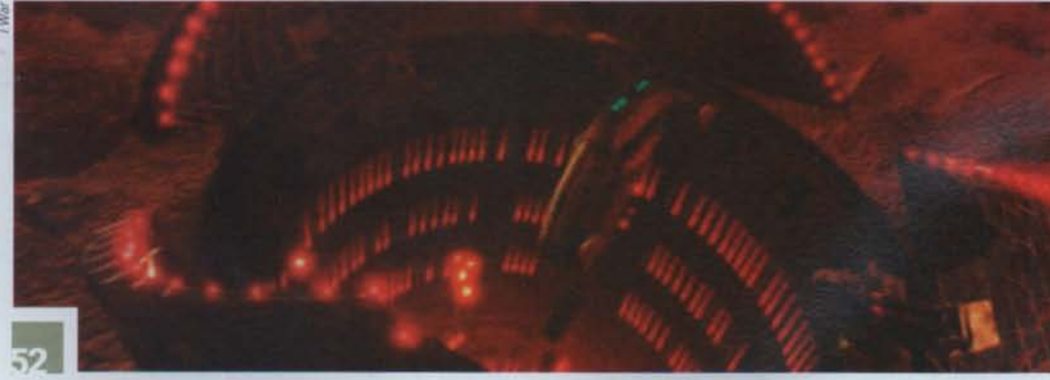
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The Lost World: Jurassic Park



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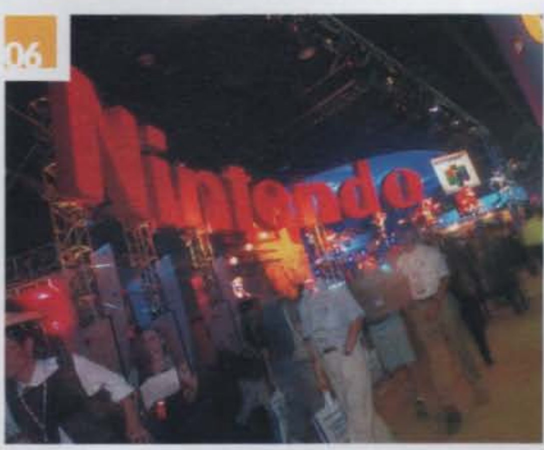
I-War



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The Electronic Entertainment Expo at Atlanta







ISDN-linked football game by Kay-San



Revelation



Game Boy *Tamagotchi*



F-Zero 64



Powerslide



Quake 2



GoldenEye

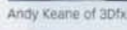


Time Crisis



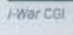
X-COM: Apocalypse





Andy Keane of 3Dfx





Final Fantasy Tactics CGI



I-War CGI





Side by Side 2



Shinobi (running under PC emulation)



3D Game Machine 2.0 demo

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Cutting Edge

The latest news from the world of interactive entertainment

PC GAMES GO FOR GOLD IN ATLANTA

The Atlanta E3 show opened its doors in late June to the usual heaving throng of journalists, industry veterans, buyers, salesmen, PR executives, and assorted hangers-on from around the globe who shambled around not really knowing where they were. It's always debatable how much real business takes place at a show that relies more on surface gloss than substance, but this year's E3 was unusual in that it belonged to the least glossy machine of all: the PC.

With the absence of any new hardware announcement from either Sony or Sega, and few games of the stature of last year's *Super Mario 64*, the crowds were left to pick their way through a multitude of PC titles. There's nothing new in a show laden with CD-ROM titles – every E3 for the past five years has featured progressively more PC software – but what is new is the seriousness with which the industry treats the market and the emergence, once again, of a home computer that is now competing on a level footing with the best the consoles have to offer and, in some cases, coin-ops.

A brief sortie around the hundreds of stands left visitors in no doubt about the cause of this new-found confidence. Despite having no stand on the main floor, 3Dfx dominated the show by proxy. Its distinctive green logo seemed to accompany virtually every PC monitor in the hall, but, more importantly, its technology was powering almost all of the biggest games exhibited at the event. Meanwhile, installed in its own off-floor suite, the California-based company showcased the best titles to exploit its technology, including a number of early demos.

Although the firm remained tight-lipped about its next generation of graphics chips, 3Dfx displayed several titles powered by parallel Voodoo processors (with a similar spec to Atari's *San Francisco Rush* arcade board). These included 3D Realms' *Prey*, *Earthsiege 3* from Dynamix, a racing game entitled *Beyond Bizarre* from Bizarre Creations, *Quake*-with-a-plot *Half Life* from Valve, and *Skies*, a *PilotWings*-inspired title from high-end 3D expert Paradigm. The demo board, known as SLI, is capable of throwing in excess of one million textured triangles per second around the screen, although, curiously, there was little demonstrable leap in performance above the standard board, judging by the demos witnessed by **Edge**. Whether this technology provides a clue to the power of the next-generation 3Dfx chip is anyone's guess at this juncture, but whatever the importance (or not) of the SLI board, the fact is that until developers begin designing games from the ground up with the polygon-pushing power of the chips in mind, the best the PC market can hope for are games





With no new hardware announcements at the show, it was down to Nintendo to spice things up with *Banjo-Kazooie*

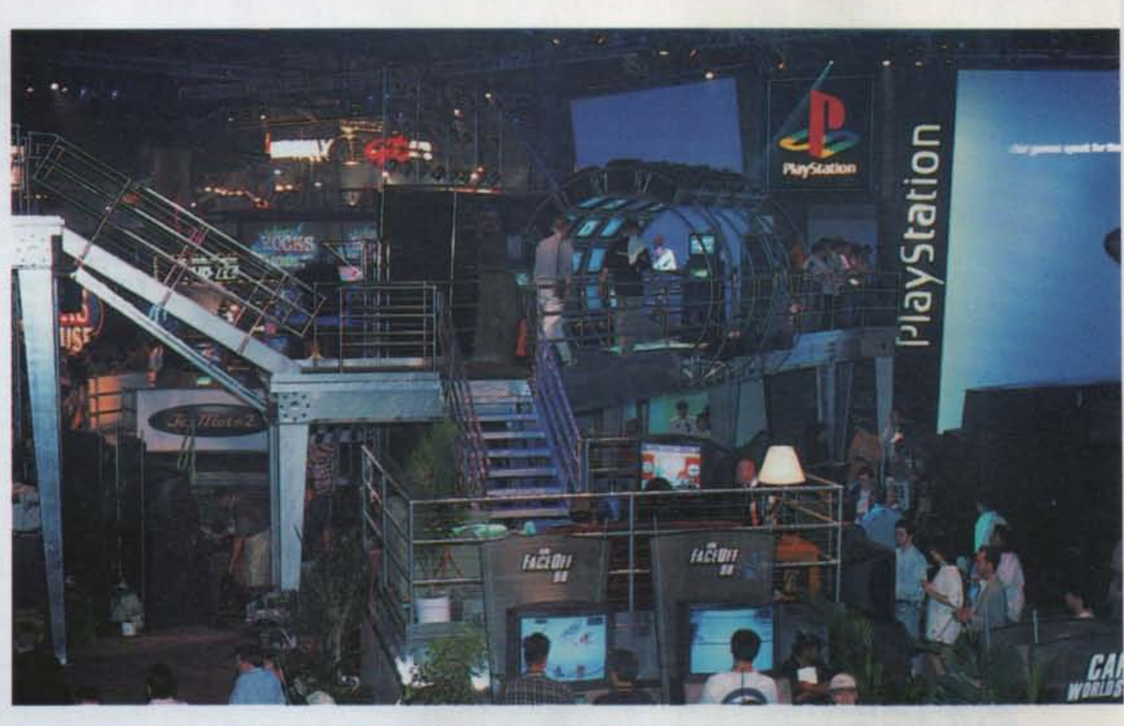


The 'battle of the stands' was in evidence again this year, but it was Nintendo that dominated the hall with its usual combination of neon, scaffolding, and staff dressed up as game characters. Passers-by were visibly impressed









Sony's stand cost around $2m and looked very much like the 'GamesMaster' studio. Of the large collection of PlayStation games on show, *Rapid Racer*, *Gex 2* and *Final Fantasy VII* stood out most. Ironically, the best game, *Metal Gear Solid*, was shown on the Konami stand and not Sony's steel behemoth

designed for the Pentium with enhanced texturing and smoother frame rates.

The most immediately impressive 3Dfx title shown was an off-road racer from Australian codeshop Emergent. As a demonstration of the as-yet-untapped potential of the Voodoo Graphics technology, it left all other previous 3Dfx titles firmly in the shade with its silky smooth 60fps update and a texture quality rivalling that of Sega's ubiquitous Model 2 arcade board. In fact, no PC game has ever looked this good, but whether PC game designers will be able to match the playability and design qualities of games that have their roots in the arcades is debatable.

Back in the main hall, much of the talk revolved around the twin attractions of *Quake* and *Tomb Raider* sequels, with

AN OFF-ROAD RACER FROM AUSTRALIAN CODESHOP EMERGENT RIVALLED SEGA'S MODEL 2 ARCADE BOARD

opinion divided over which was the most impressive. The PlayStation *TR2* looked particularly rough next to the SVGA, filtered 3Dfx version, running smoothly on neighbouring PCs. New gameplay features include a superbly realistic lighting effect that allows Lara to shine a torch around a dimly lit room, while a shark-infested pool gave a fleeting glimpse of a potentially hazardous encounter. Ms Croft herself has gained a number of extra moves, most notably a climbing manoeuvre that sees her scaling vertical walls with beautifully realistic animation. No Saturn version was available and rumours persist that Sony has tied up an exclusive deal with publisher Eidos Interactive and effectively doomed any prospect of the game ever appearing on Sega's struggling format.

As well as showcasing one of the most impressive titles of the show, the Eidos stand was unfortunately host to one of its biggest disappointments. *Doom* creator John Romero's much-vaunted shoot 'em up, *Daikatana*, limped along unaccelerated, with a poor frame rate, few creatures and unimpressive AI. It's too early to tell whether this represents mere teething troubles for the fledgling Ion Storm or something more serious, but whatever the cause for presenting such a half-baked demo, Eidos will no doubt be looking for some impressive results in time for ECTS in September following its $8million investment in the company.

The Eidos stand was also home to other attempts at harnessing realtime PC 3D. Innerloop's *Joint Strike Fighter* (**E**43, 47) lurked inconspicuously behind the main banks of monitors and yet managed to convince programmers that its IFS technology was indeed a salient 3D innovation. Programmers flocked around asking questions, while most ▶



Sony's video tunnel was a mid-'80s-style stab at futurism which failed to impress showgoers. Many went in feeling perfectly well but came out with a stiff neck, blurry eyes and a migraine



Considering the Saturn's dwindling market share, Sega had a strong presence at the show. Its Model 3 coin-op, *The Lost World*, drew the crowds, as did the belated 3D platformer, *Sonic R*

◀ people were simply impressed that such astounding visuals could possibly be running on a PC with 'No hardware acceleration' – as was boldly declared on a sign next to the monitor. To that extent alone it was certainly an unusual product at E3.

Squaring up to the Eidos dominance, Activision unveiled its strongest-ever line-up, divided more or less equally between firstperson shoot 'em ups (*Quake 2*, *Hexen 2* and *SIN*), strategy games (*Dark Reign*, *Netstorm*) and a clutch of shaky PlayStation titles, including *Apocalypse* – the first videogame to feature a virtual version of a Hollywood star (Bruce Willis). *Quake 2* certainly garnered much of the

THE QUAKE 2 TECHNOLOGY CONJURED UP VISIONS OF COLOURFUL ENVIRONMENTS AND DETAILED CREATURES

attention, despite the fact that it is nothing more than an engine at this stage. It was merely a demonstration of the power of the *Quake 2* technology, which, in conjunction with the 3Dfx card, conjured up a colourful, hi-res environment inhabited by legions of detailed creatures. It is, however, becoming increasingly difficult to get excited about the firstperson genre, awash as it is with endless grey corridors, mindless enemies and futile puzzles which seem to highlight the gameplay gulf that exists between the likes of Nintendo and the countless US developers all hell bent on producing what amounts to the same game a thousand times over.

One of the biggest surprises of the show was firstperson shooter *Prey* from 3D Realms (see page 34), shown behind closed doors on the GT stand. Yet another game powered by 3Dfx, it is already two years into its development cycle but is finally beginning to take shape after seemingly endless restarts. Like *Quake 2*, the most impressive aspect was the outstanding 3D engine, which displayed textures of such quality that they resembled the prerendered sequences of just a couple of years ago. Unlike *Quake*, however, the technology has at least some bearing on the gameplay, thanks to 3D Realms' innovative 'portal' technology, which distorts the maps, Tardis-like, to provide teleports, puzzles and mind-bending perspectives, all of which will impact on the multiplayer game. Despite the polished state of the engine, *Prey* is still a full year from completion, and quite how it will compare to next year's inevitable *Quake 2* clones is unclear.

British developer Psygnosis had a good show this year. Not only did it boast one of the most expensive stands (rumoured to have cost more than $1million), but its 3Dfx title, *G-Police*, drew the crowds with its detailed texturing and high-quality vehicle models. It's difficult to see where the game is going in terms of gameplay, with flight limited to a few city blocks and little to do apart from dropping bombs and shooting down enemy aircraft, but it did manage to create a convincing 'dark future' atmosphere within the limited confines of the play area, the city resembling a magnified version of *Syndicate Wars*.

Psybadek was also on show, albeit in a fairly basic form, as was the near-complete *Overboard*. **Edge** was also ushered into a darkened room for an advance look at Pure Entertainment's title, *Respect Inc*, a 3D gangster cartoon whose unique selling point, its realtime polygon deformations, showed promise.

By contrast, the industry's console heavyweights were short on surprises. Nintendo, which had taken the same stand that it took at last year's event, chose not to start talking about or even showing its 64DD player (which is being saved for its home-grown Shoshinkai show in Japan in November), relying



Can Sonic find his way back to the top of the heap? Probably not on the Saturn, but *Sonic R* is a good try

cutting edge cuttings

Cart cost drop shock
Thirdparty Nintendo 64 games are to be reduced in cost to publishers by $10 in the US and Europe, effective immediately. The Japanese company attributed the decision to lower manufacturing costs, although it is more likely to be a response to Sony and Sega's own recent decision to reduce software prices.

Feel the Force
Act Labs is developing a force-feedback steering wheel which will be compatible with both the PC and consoles. The company's Force Feedback Racing System uses encoded cartridges which allow programmable force feedback for their particular machine. Act is currently in talks with the major console manufacturers over licensing.

Mario versus Mario
According to the latest official figures issued by Nintendo of Japan, by the end of March 2.04 million Nintendo 64s were installed in Japanese homes and Nintendo could count on the services of approximately 50 thirdparty licensees. However, the real surprise came with the software figures, which claimed that *Mario Kart*

instead on a few key secondparty software titles to wrest attention away from its rivals.

With the exception of *StarFox 64* – which was pushed the most heavily, within a large enclosure featuring a pair of giant Arwing fighters housing Nintendo 64s hooked up to a huge videowall – Rare's line-up dominated the proceedings. The much-hyped *Banjo-Kazooie* (see page 38) materialised at the event after months of speculation (it was originally known as *Dreams*), and was joined by another Rare project, *Conker's Quest* (see page 39). Curiously, though, both titles are a spin on the Super *Mario 64* theme, with unashamedly similar design characteristics and some beautiful textured landscapes and characters.

In gameplay terms, *Banjo-Kazooie* was clearly the most advanced of the duo, yet in some respects its visuals were arguably surpassed by those of its even more sickly cute cousin. *Conker's Quest*, perhaps more than *Banjo*, provides adequate evidence that Nintendo's machine is set to be the host for some seriously beautiful games. Wandering over to Sony's big 3D platformer, *Blasto*, after gazing at either *Banjo* or *Conkers* was like watching a premium SNES title followed by a budget Commodore 64 game.

Nintendo's crowning glory wasn't either of these, though. It was yet another Rare game, *GoldenEye*, which is arguably the British company's most accomplished effort to date (see review on page 76). Strangely enough, Nintendo of America didn't seem to push the game as much as its quality deserved. A row of monitors running the game was fairly busy throughout the show, but considering the strength of the title (unusual for a film licence), it's odd to think that NOA gave more emphasis to a brace of 3D platformers than this striking, innovative foray into firstperson 3D.

Thirdparty efforts for the Nintendo 64 were a mixed bag, however. *Top Gear Rally* impressed with its *Sega Rally*-style visuals, although most people agreed that it lacked speed. *Lamborghini 64*, on the other hand, was faster but this, the rather unrealistic *San Francisco Rush* and *Multi-Racing Championship* all suffered in that sense that there wasn't a clear enough divide between them and the current leading-edge 32bit racers – a prevailing problem with N64 racing games. Perhaps the best was witnessed on Nintendo's 'coming soon' video, where the first glimpse of the ultra-fast



Activision had its best year ever at the show. Its stand was dominated by a giant robot, promoting its forthcoming *Heavy Gear* title, but most visitors were there to witness *Quake 2*

F-Zero 64 was presented, along with new clips of *Zelda 64*, *Yoshi's Island 64* and assorted thirdparty titles.

Sony fought back at E3 with a multitude of titles and the biggest and most lavish stand to date. Unfortunately, few of the games on display proved special enough to give Nintendo loyalists anything to lose sleep over. The double whammy of *Crash Bandicoot 2* and *Blasto* proved that SCEA's commitment possibly lies more with big-bucks marketing of tried-and-tested formulas than the creation of innovative and progressive videogames. *Gex 2* from Crystal Dynamics – which gets **Edge**'s vote for the best-looking 3D platformer available for Sony's machine – was tucked away on a single monitor and therefore had little presence. Was this possibly an SCEA ▶



Eidos pushed Core twins *Tomb Raider 2* and *Fighting Force*



***Need for Speed 2*, which was almost laughable in its standard form, found a new lease of life thanks to the 3Dfx card, drawing right to the horizon without pop-up**



64 had outsold *Super Mario 64* – the two games sold 1.54 million and 1.39 million respectively, with *PilotWings 64* trailing behind with a mere 0.29 million copies.

Namco lacks Logic

Namco is apparently set to stop developing specifically for the PowerVR chipset and has instead turned its attention to supporting 3Dfx and other cards for future PC conversions. This will come as a significant blow to VideoLogic, which had originally namechecked Namco as one of its major partners. *Rave Racer* was due to be the first killer app for the card, but a protracted development period meant that the game was seriously delayed.

Saturn goes RF

Sega has finally decided to reconfigure the PAL Saturn to include an RF socket and lead. Although unofficial SCART-to-RF adaptors have been available since the machine's launch, it was previously only officially available with SCART connection. According to Sega, the move has been made in recognition that many children still have RF-only TVs in their bedrooms – where they often end up playing videogames. Furthermore, the timing may have been precipitated by the drop in price to £99 instigated by Currys and Dixons. This will probably put the machine in the 'birthday present' price range, so more young children will have access to the machine. Meanwhile, Sega has confirmed that it will not be







Randy businessmen, idiots in beards and hired totty revealed the sad underbelly of the industry



Virgin's stand concealed one of the most eagerly anticipated titles of the show: *Blade Runner*. The presentation was superb, but at this stage weary delegates would sit through anything for a comfy sofa and a cup of tea...

initiative to avoid the embarrassment of being upstaged by a thirdparty product?

Possibly the PlayStation's strongest title at E3 was SquareSoft's *Final Fantasy VII*, which is set to debut in US stores on September 7. The game may not have been the most accessible title on display but hardcore gameheads hogged the monitors for hours, enthralled by its engrossing storyline and beautiful visuals. Aside from that, SCEE's technical tour de force *Rapid Racer* won the accolade for best PlayStation racer, while Konami's *Metal Gear Solid* (only shown on video) managed to capture the imagination of almost every delegate who ventured into Konami's booth. The new video revealed some amazing new gameplay diversity and visual effects and was so impressive that some quarters even claimed that this was the game of the show on the strength of the paltry five minutes of tape shown. Konami went so far as to invite the Japanese developers of the game for a Q&A with journalists unfamiliar with the game.



FFVII ENTHRALLED GAMEHEADS WITH ITS ENGROSSING STORYLINE AND BEAUTIFUL VISUALS



It conquered the show by proxy, held its meetings as far away from the main hall as possible, and had the support of every top developer. 3Dfx appears to be making all the right moves

Although Sega is fully aware that the Saturn now represents little threat to the huge installed base of the PlayStation, it still managed to make the most of its limited line-up with a large area of floor space. Key Saturn games on its stand included an early version of *Sega Touring Car Championship*, the technically slick *Sonic R* from UK developer Travellers' Tales (see page 41), plus Japanese-developed titles such as *Last Bronx* and *Panzer Dragoon Saga*. It was only really the awesome might of a pair of *Lost World* arcade machines (see page 58) that reaffirmed Sega's unrivalled dedication to pursuing the state of the art in interactive entertainment thrills. **E**

releasing its NetLink peripheral in Europe. The company claims this is because Euro audiences are not quite as receptive to online gaming as Stateside gamers, but the device's poor US sales may have something to do with the decision.

Acclaim toys with Turok

Toy firm Playmates has struck a deal with Acclaim to develop a range of *Turok* toys, including action figures, vehicles and play sets. *Turok* has recently topped the N64 charts in Japan and has made around £40m in global sales since its release. This move follows attempts by Eidos to cash in on its own hugely profitable intellectual property, Lara Croft. The prospect of a *Tomb Raider* movie is now apparently even closer to happening.

Adult Fantasy

The Entertainment Software Ratings Board, the American version of ELSPA, has given *Final Fantasy VII* a teen rating for its US release, effectively keeping it out of reach of gamers under 13. This decision was made due to the game's adult content – including a brothel scene, a touch of cross-dressing and some violence toward female characters. The game remains totally uncensored, however. A BBFC rating is also highly likely for the UK release and, given the current moral climate in this supposedly democratic country, some cuts are possible.

Tekken beckons, comic company reckons

Comic company Knightstone is set to release a

By column: (N64) *Tetrisphere*, *GoldenEye*, *Banjo-Kazooie* and *Conker's Quest* (the only title to be published by Rare itself); (Saturn) *Sonic R*, *Panzer Dragoon Saga*, *Last Bronx* and Model 2 conversion *Sega Touring Car Championship*; (PC) *G-Police* from Psygnosis, *Quake 2* from id Software, *Tomb Raider 2* from Core and the incredibly late *Unreal*, from Epic; (PlayStation) *Blasto*, *Crash Bandicoot 2*, *Final Fantasy VII* and the hi-res *Rapid Racer*









Some jobs just aren't worth having... These poor sods were charged with stalking the hall, accosting anyone foolish enough to meet their gaze. Highlights included a giant Scots bloke with elephantitis of the calves, a red muppet, a woman with radioactive breasts, and the world's least-scary green monster

series of eight comic books inspired by Namco's classic beat 'em up trilogy, *Tekken*. The series, which is due to be published monthly from September this year, feature events and storylines that have shaped the three games, and promises to include fully rounded characterisations of each of the fighters. Not exactly interactive, though, is it?

Grolier catches Braben's Virus

Elite creator David Braben is developing a PC version of 16bit classic *Virus* – which also appeared under the moniker *Zarch* as the first game released for Acorn's Archimedes computer. *Virus 2000* is due to support 3Dfx's Voodoo Logic chipset and will be Braben's first game since he was taken to court by publisher Gametek over the bug-ridden release of *Frontier: Elite 2*. Grolier Interactive is set to release the game in time for Christmas.

EA and Intergraph deliver a card

Electronic Arts has signed an agreement with Intergraph Computer Systems, worldwide supplier of interactive 3D graphics technology, workstations and PCs. The terms of the agreement give the American games giant exclusive worldwide distribution rights to Intergraph's Intense 3D Voodoo graphics accelerator product line, which incorporates 3Dfx technology. At present, only two other manufacturers – Orchid and Diamond – produce 3D graphics cards.

SNK ROLLS OUT 64BIT HARDWARE

SNK recently introduced a new arcade board at a private show held in Akasaka Mitsuke in the centre of Tokyo. Named Hyper Neo-Geo 64, the board, aimed at the 3D coin-op market, is built around a 64bit RISC processor and includes 64Mb of program RAM and up to 96Mb of vertex memory.

Along with the hardware itself, SNK showed off two Hyper Neo-Geo 64 games at the event: *Samurai Spirits 64* (previously seen in video form at the AOU show) and a new racing game entitled *Round Trip*. The former was presented as a 40%-complete playable demo with several characters and four out of the proposed 12 stages available. However, visitors to the show were not allowed to participate in the game themselves – instead, SNK representatives played through the levels pointing out key assets.

Some present at the show believed this reluctance was down to the fact that the game employs a full 3D arena, allowing players to circle each other as in *Toshinden*. After much research and playtesting, this approach was abandoned as too complicated by the *Virtua Fighter 3* team and replaced with a simpler escape mode. It could be then that SNK was nervous the audience would be unable to cope with this innovative control method without plenty of practice, and would therefore denounce it out of hand. Whatever the case, many gamers will no doubt be concerned that this increased realism will hamper the balance and playability of the game.

In terms of visuals, *Samurai Spirits 64* is less impressive than the fighting games seen so far on the industry's hi-end standard bearers, Model 3 and Konami's forthcoming Cobra board. Its textures are cruder and the characters not nearly as strikingly realistic as those in *Virtua Fighter 3*. The game also seems to suffer from a high degree of pixellisation, something that may hamper the game's chances when it premieres in Japan in August.

The other title shown, *Road Trip*, is an innovative off-road racing title which gives the player a choice of several RV vehicles, such as a Land Rover and a Mitsubishi Pajero. As in Konami's *GTi Club*, racers get the chance to choose their own route through each circuit, and here many of the alternative routes have different road surfaces which affect vehicle handling and the amount of force-feedback the cabinet's steering wheel receives. Unfortunately, this game also led to disappointment from some showgoers. Although the backgrounds are graphically impressive and varied, the gameplay is rather slow when compared to other hi-end efforts. Like *Samurai Spirits 64*, however, the title was far from complete.

For its inconquerable 16bit Neo-Geo technology, SNK revealed *King of Fighters '97* which appears to add new moves and characters to the familiar recipe, but little else. There was also a coin-op spin-off which allows players to take photographs of themselves posing with their favourite characters. Can the craze for glorified passport photo machines get any more bizarre?

While the early demos shown are the company's first dalliances with true 3D gaming, industry pundits will be watching the Osaka company for news of a possible 64bit home console. Whatever happens, it's unlikely that the technology will cause the arcade divisions of Konami or Sega any sleepless nights.







Although playable versions of two Hyper NG64 games were shown, only SNK staff, dressed in yellow jumpsuits, were allowed to take part



***Samurai Spirits 64* lacks the graphical prowess of Model 3**















***Round Trip* currently boasts impressive backgrounds, but sluggish action**

Hyper Neo-Geo 64

Specifications

CPU:
64bit RISC
RAM:
4Mb
Program memory:
64Mb 3D
Vertex memory:
Maximum 96Mb
Texture memory:
Maximum 16Mb 2D (sprites)
Displayed sprites:
1536 sprites/frame (at 60fps)
Character memory:
Maximum 128Mb
Main functions:
Enlarge, Reduce (scaling), Chain, Revolution, Mosaic, Mesh 2D (scroll)
Scrolling screens:
4 (maximum)
Character memory:
64Mb
Main functions:
Enlarge, Reduce, Rotation, Morphing, Horizontal/vertical line scrolling.
Colours:
16.7 million palette – 4,096 colours displayed simultaneously
Sound Channels:
32
Sampling frequency:
44.1Mhz (maximum)
Wave memory:
32Mb

PREDICTIONS UP AS N64 GAME SALES SOAR

THE Games has increased its N64 sales forecast for 1997, due to the apparently unexpected success of recent software releases on Nintendo's machine.

The N64's software market share has seen a boost of 34% to claim nearly 20% of the console territory following high sales of *Mario Kart 64* and *International Superstar Soccer 64*. For the week ending June 28, Nintendo's console had three of its titles in the top five of the ChartTrack UK console chart, with *ISS64* at number one, *Mario Kart 64* at two, and *Super Mario 64* at five.

Surprisingly, Konami's *ISS64* sold more units in its first week than its PlayStation counterpart (*ISS Pro*) did during its own first week on sale. **Peter Stone**, Konami's UK consumer division manager, recently told trade newspaper *Computer Trade Weekly* what he believed to be the reasons behind these figures.

'Obviously the PlayStation has a larger installed base,' he said, 'but there are over 200 titles released, which gives consumers a wide choice but also makes it tough to achieve big numbers for even a strong title.

'The Nintendo 64 has a smaller installed user base, but hardware sales are buoyant and, with so few titles available, consumers are hungry for top-quality games like *ISS*.'

According to THE Games, over 10,000 N64s have been sold every week over the last couple of months. With major releases such as *StarFox 64* and *GoldenEye* only a few months away, the sole Nintendo distributor in the UK has increased its forecast for the year.

Although the initial figure stood at 450-500,000 units, THE Games is now confident it will be very close to the PlayStation's year forecast of 650,000. A conservative estimate of the number of N64s in the UK currently stands at 180,000, with the year's most important months – the run-up to Christmas – still to come.

Meanwhile, in the US, after witnessing Sony's product-intensive stand at E3, Nintendo of America chairman **Howard Lincoln** expressed his fear for the current overcrowded state of the PlayStation market which according to him has 'too many titles chasing too few slots.'

His comments followed Sony's announcement that there are 243 titles available at present for its machine, with a further 150 possibly arriving by next March, a move the Nintendo chairman described as 'a recipe for disaster.'

'I certainly wouldn't want to be coming out with the 350th game for the PlayStation this Christmas,' said Lincoln, who rarely hesitates when invited to share his views on Nintendo's substantial competition. 'Sony seems to take great pride in having so many games, but this is not a disposable CD-ROM business – it's about quality entertainment.'

Although many have applauded Nintendo for its 'quality over quantity' approach, some still yearn for a bigger software selection. Lincoln went on to defend this criticism, which stems from the fact that the N64 game roster currently stands at 17 in the US and only nine in Europe.

'Our global president Mr Yamauchi believes that the easiest way to bankruptcy is to put a lot of crap. I agree with that, and we certainly don't intend to do it.'







Recent PAL releases such as *Mario Kart 64* (left) and *ISS64* have substantially increased the N64's share of the UK software market

N64 POISED FOR ARCADE ASSAULT

Japanese developer Seta has revealed that its Nintendo 64-based arcade board is finally nearing completion.

Originally announced last year, the ALECK64, as it is to be known, was co-developed with a custom licence from Nintendo and represents an enhanced version of the N64 hardware, with improved sound and 2D graphic chips. However, the board shares the MIPS 4300 CPU and software tools of Nintendo's 64bit machine, and development costs are therefore expected to be less than that of proprietary arcade hardware, giving it a System 11-style economical appeal.

Seta's role as a research-and-development company with Nintendo is not new. The Tokyo-based unit has in the past worked closely with the Japanese games giant on NES and SNES hardware including development support tools, as well as developing custom chips for other hardware and software applications – the performance-enhancing DSP chip included in Seta's own *Exhaust Heat 2* SNES title, is an example of the latter.

The boards have already begun distribution to arcade games companies, and 10,000 units are scheduled to be sold by the beginning of next year.

While Seta has not yet released details concerning any of the forthcoming games, the company has indicated that all future titles will be easily ported to the N64. This is an important point, as the arcade is a perfect place for new software to be consumer-tested before the decision is made to move to cartridge duplication.

The move will see Nintendo attempting a comeback into the arcade game scene after a long period of inactivity. Despite having an arcade pedigree which stretches back further than its most famous early coin-op, 1982's *Donkey Kong*, very little has been offered by the company in the west since the seminal platformer *Super Mario Bros* in 1985, and the recent releases in conjunction with US developer Midway, such as *Cruis'n USA* and *Killer Instinct*, have had a mixed reception.



Seta's N64-based arcade board adds better sound and 2D chips, but retains the console's CPU

(out there)

REPORTAGE FROM THE PERIPHERY OF THE VIDEOGAMES INDUSTRY

Pub footy comes of age

According to well-established tradition, if the regulars of one pub want to challenge those of another to a football match, the teams have to get up early on Sunday morning, track down something bearing a vague semblance to a 'kit', and trudge about muddy patch of grass masquerading as a pitch. A distinctly unattractive proposition to most beer-bellied punters.

This could well be a thing of the past if Kai-San Ltd's latest project works out. The company, a subsidiary of Satvision PLC which produces massive TV screens for pubs, has developed an as-yet-unnamed five-a-side football videogame that can be connected to an ISDN line. This means any pub team with a machine installed at their local can play against any other drinking den in the world where a similar machine is present. The game itself looks reasonably proficient in terms of visuals, and the creators have fully captured the spirit of pub football by including a punch option. No doubt later editions will include headbutts, fag breaks at five minute intervals and 20-stone players who puff around the centre circle before collapsing in sweaty heaps.

To ensure that rivalry remains fierce throughout the land, Kai-San is also planning to set up local and national inter-pub leagues with cash prizes for the winning teams. The system is being launched in September and Kai-San is expecting 600 units to be in place by June 1998. Better start practising those combined beer-drinking/controller-bashing manoeuvres now…



If videogame designers were movie directors…

With films relying increasingly on CGI and videogames, conversely, on cinematic techniques, the two worlds are slowly converging. French film director Marc Caro has announced his attention to get involved in games, and Steven Spielberg has already made the plunge with Dream Works Interactive; perhaps it is only a matter of time before game designers leap in the opposite direction. With this in mind, **Edge** takes a few videogame figures and predicts what would happen if they got their hands on a film crew…

	Shigeru Miyamoto	Jeff Minter	Dave Perry	Time Crisis team
director	Steven Spielberg	Tommy Chong (of Cheech and Chong fame/notoriety)	Terry Gilliam	John Woo
pitch	Effects-laden blockbuster set in a mystical dream world populated by lots of short, cute people and talking animals	Weird '70s drug flick meets spectacular Jean Michel Jarre-style light show. With a cast made up entirely of llamas	Surreal futuristic sci-fi comedy adventure packed with large amounts of intricate visual detail	Action-packed adventure with a ludicrously high body count, about a guy who can't go anywhere without people trying to shoot him
budget	Irrelevant – guaranteed to make far more money than was spent producing it	£1,000 worth of controlled narcotic substances would probably do the trick	Doesn't matter as long as he can buy a new sports car with the film's profits	Low: lots of blood-red paint, plastic guns, explosives and crap translator for subtitles
prospects	Phenomenal success. Adults find the repressed child within them fighting its way out, while children soon begin playing with small plastic plumbers and gorillas	Cult notoriety. Hardly anyone sees it, though, because he releases it on some low-key new cinematic medium that promises great things, but is, in fact, a bit rubbish	A failure because of its intelligent, wildly different concepts, which bewilder most US audiences. He returns with 'Earthworm Jim: the World's Dumbest Superhero' and cleans up	Rapidly gains cult status until rest of the world catches on. Hollywood directors fall over themselves to 'borrow' the film's ideas. To be shown thereafter every Sunday on Bravo

EDGE SINGLES OUT THE WINNERS AND LOSERS IN THE INTERMINABLE BATTLE FOR VIDEOGAME CRED

(game on)

GoldenEye, which manages the not-too-difficult feat of being a great 007 game, and reinforces Rare's reputation as *the* secondparty maestro.

Sid Meier's return to the PC gaming scene with *Sid Meier's Gettysburg*. Welcome back gameplay over graphical content.

Sony's E3 party. Tough to get into, of rock-stadium proportions, and distinguished by senior industry figures getting very messy indeed…

The almost-certain return of **SNK** to the console scene with HNG64.

The venue for this year's E3, which saw 20,000 less attendees than last year, largely because of the venue shifting from LA (where the majority of US press and developers are based) to Atlanta, Georgia (a place where culture is something only found in a petri dish).

Lylat Wars, the proposed name for the European release of *StarFox 64*. What, no *StarWing 64*? Just what *is* going on down at Nintendo HQ?

The jerky graphics and chunky textures of **Daikatana** at E3, which left id with the last laugh. Is John Romero's honeymoon period over?

(game over)

Where are they now?

NAME: **GUMPEI YOKOI**
FAMOUS PRODUCTS: **GAME & WATCH, GAME BOY**



Recruited by Nintendo Co Ltd in 1969, Gumpei Yokoi was one of the essential components in the company's transition from playing card manufacturer to multimillion-yen videogame giant.

An obsessive inventor, Yokoi was soon moved into Nintendo's burgeoning games and toys division where he began by creating a toy extendible arm, marketed as the Ultra Hand, which sold 1.2 million units in 1970. However, several years later, the popularity of handheld electronic calculators coincided with the birth of the videogames market, and inspired Yokoi to invent the massively successful Game & Watch – a product which laid the conceptual foundations for his greatest success: the Game Boy, launched in 1989.

He has not enjoyed such success since the Game Boy, however. Yokoi and his R&D1 department went on to develop the Virtual Boy, a 'virtual reality console' with a red LCD display. Launched in Japan at around the same time as the PlayStation and Saturn, Yokoi believed it would be more successful than both because gamers were becoming bored with traditional TV displays. He was wrong, and the machine flopped terribly, game retailers eventually offloading cartridges such as *Wario Land* at ¥98 (50p). Rumour has it Yokoi was removed from active work within R&D1 and given a fairly superficial role after this point, which galled the inventor enough to leave Nintendo.

Now, however he is working with a new Japanese company – Hiro Co. Here the veteran electronics wiz is developing a new handheld game device called Kunekuneccho (or Anaconda) which features a snake that the player must feed and look after. The device is due to be launched in Japan in July, with three or four new models following each year.

Once again, it seems Yokoi has taken his inspiration from previous sources, the obvious influence here being Bandai's Tamagotchi phenomenon. But then if anyone can eclipse the success of such a huge product, it is surely this man.

VIDEOGAMES ON THE EDGE

The games – old, new, whatever – that have brought work to a standstill in the Edge office this month

GoldenEye (N64)
Rare's inspired firstperson shoot 'em up gives players a more convincing movie-like experience than any example before it, with huge, atmospheric locations and an abundance of super-real animation.

Yuke Yuke Trouble Makers (N64)
Remember SNES title *Yoshi's Island*? **Edge** does, and this great piece of 2D platform craft brings it all back. Get past the early visual limitations and discover heaps of bizarre twists and sublime gameplay.

X-COM: Apocalypse (PC)
Even more addictive than its predecessors, *Apocalypse* stands as a shining example of complex and rewarding gameplay over graphics. Those who thought realtime combat would ruin it were wrong.

Time Crisis (PlayStation)
The huge PlayStation-specific new section makes this a supreme lightgun shooter. Compulsive, exhilarating and relentless, *Time Crisis* takes on *V-Cop* at its own game and shoots it down like a dog.

Salamander Deluxe Pack (Saturn)
Konami's old shoot 'em ups never die, they just get compiled and rereleased – much to **Edge**'s delight.

nuMedia

A meeting point for media capitalising on the digital entertainment revolution

in association with



No 16

CD-ROM



Coldcut: Let Us Play

Strangely, it's the old codgers of the music world (Peter Gabriel, Sting, Prince, etc) who have tended to get most involved in new technologies like CD-ROM and the internet, while bands young enough to truly exploit the media in exciting ways simply haven't bothered. The situation is changing, however – several groups have recently broadcast live gigs over the Net and many more are setting up their own websites. A few, like near-legendary DJ outfit Coldcut, have even attempted their own multimedia CD-ROMs.

'Let Us Play', which comes free with Coldcut's soon-to-be-released album of the same name, is a mixed bag of standard CD-ROM clichés and innovative touches. On the hackneyed side, there's the obligatory quiz, an A-Z of the group's influences, and a collection of seven of their videos. The latter may be a common feature of music based CD-ROMS, but at least here the fodder is imaginative and well-produced, especially 'Natural Rhythm', a track created using samples from nature (frogs jumping on rocks, etc) and illustrated with appropriate film footage.

On top of this, though, the disc includes two music toys, 'My Little Funkit' and 'PlayTime', which allow the user to remix Coldcut tracks by simply clicking on buttons and slides. These provide the real meat of the product and, despite the simplicity of the applications, allow the player to come up with some great tunes and effects.

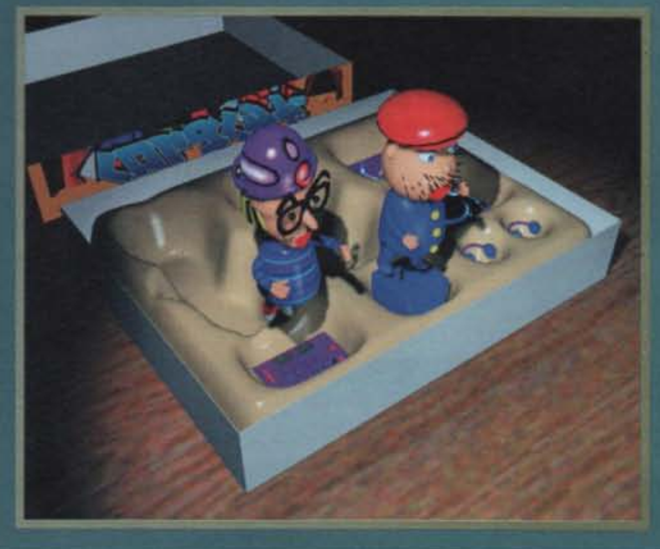
'Funkit' is the more straightforward of the two, providing three banks of loops (sampled voices, scratches, etc) and three Coldcut backing tracks; the user simply starts the track and clicks on the sounds to create new mixes. 'PlayTime', based on an 'artmixer' named Synopticon which was recently installed at the Barbican, is more complex. Here users are presented with a retro-style interface which allows them to create complete trip-hop tracks with just three synchronised channels.

Although some elements of 'Let Us Play' reek of 'filler', the music applications alone justify Coldcut's decision to create this disc. Perhaps one day, all albums will come with software that allows listeners to remix tracks according to their own preferences. Here's hoping.









- Published by Hex
- Developed in-house
- PC/Mac
- Free with audio CD (£14)



E

Turn The Dark Off
Howie B
Polydor



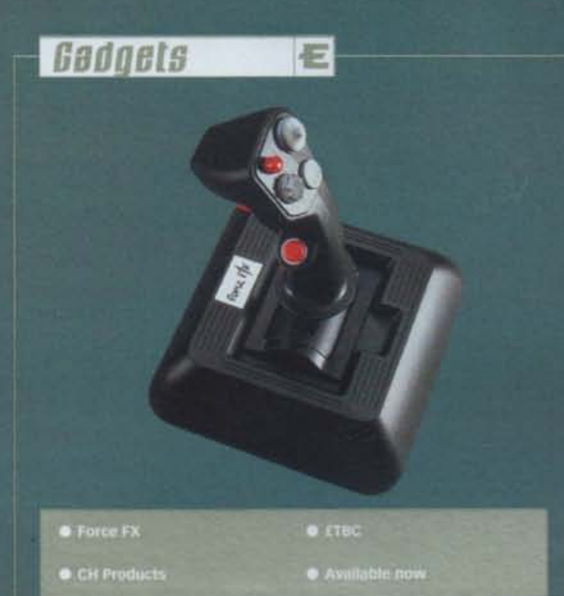
After his highly rated ambient debut LP 'Music For Babies', Howie B has obviously changed direction radically with 'Turn The Dark Off', a more uptempo and aggressive mix of beats and lyrics, with dance rather than trance as the focus. 'Angels Go Bald Too' is one of the album's great tracks and, along with 'Fizzy In My Mouth/Your Mouth' and 'Switch', represents the biggest beats on offer. 'Who's Got The Bacon' and 'Baby Sweetcorn (Come Here)' have a lighter tone but are cleverly orchestrated, with great rhythm and sampled sounds. 'Turn The Dark Off' is a definite turn on.

Vanishing Point
Primal Scream
Creation



Everyone thought Bobby Gillespie and co had blown it when they released 'Give Out, But Don't Give In' – a retrospective guitar dirge which proved that good drugs do not always lead to good music. Listening to 'Vanishing Point' three years later, however, it seems that 'Give Out...' was just a stage in the group's development. Here bluesy rock meets tripped-out dance and Chemical Bros-inspired breakbeats to create an eclectic whole similar in its scope to Faithless' 'Reverence'. Some call it desperation to stay in touch, others call it creative freedom. In truth, 'Vanishing Point' probably glitters somewhere in between.

Gadgets



Force FX force-feedback joystick

Even before arcade machines became elaborate, purpose-built hydraulic cabinets with 46-inch monster screens, their main advantage over home videogaming – apart from better visuals, obviously – was the sense of realism conveyed by force-feedback controls. With the release of controllers such as steering wheels, consoles and computers narrowed the gap, but only now, with the arrival of force-feedback devices, are gamers able to truly recreate the arcade experience in the comfort of their own homes.

Leading the race is CH Products' Force FX, which claims to be the first force-feedback joystick for the PC. The Force FX stands impressively on the desk, not necessarily because of the vast array of buttons that litter the stick itself, but rather as a result of its sheer size. Once all the leads are connected (including the FX's separate power supply), and the setup and configuration procedures for the six programmable effects completed, the fun can begin.

Because it is a joystick, using the FX is obviously more intuitive to use with flight sims than with racing games. So while *Need For Speed II* proved rather an unconvincing experience, in *Air Warrior II* the FX was in its element, recoiling frantically every time the machine gun fired, 'resisting' severe G-force-inducing turns, vibrating when the aircraft was hit by enemy fire, and requiring players to fight the stick in order to regain control after stalling.

Overall, the Force FX greatly enhances the gaming experience, providing further evidence that force-feedback peripherals could represent the next revolution in videogaming.

● Force FX	● £TBC
● CH Products	● Available now

Force FX, CH Products. Tel: 01844 345406

GX TV

The arrival of 32bit technology and CD-quality sound has finally persuaded many videogamers to connect their consoles to a hi-fi system in order to fully exploit their machine's audio capabilities. Developers, too, have responded to this trend, and as a result an increasing number of titles support Q-sound and Dolby Pro Logic options. However, a setup incorporating a hi-fi is not always possible, so some form of compromise often has to be reached.



Samsung might have the answer in its GX TV, as yet unavailable in the UK, which is aimed primarily at the gameplaying market. The portable set, which comes complete with two swivelling speakers on either side of the 13-inch screen, offers stereo surround sound, with an additional 15-watt sub-woofer built into the cabinet, and individual bass, treble, and balance controls. On the back, two audio/video inputs, one audio/video output, and dual RF inputs (for television and console) offer various connection possibilities. The resulting output is superior to that of conventional TV speakers and should therefore make it easier for players to immerse themselves in 3D polygonal worlds.

● GX TV GXE 1395	● $300
● Samsung	● Out now (US)

GX TV, Samsung Electronics. Tel: 0181 3910168

PAL DVD player

If you look hard enough, and know which specialist shops to frequent, you can now get hold of the first PAL-compatible DVD players to hit the UK – several months before the launch of the first software to actually play on the things. Two players are currently available, one from Panasonic, and this one, from electronics giant Thompson.

The player, which comes in a stylish, two-tier case, can handle NTSC discs as well as PAL movies, so it's not completely useless until September, when PAL software finally arrives. Several importers are bringing Japanese and American discs in to the UK, though there's a hefty price tag – expect to pay £30-£40 for a film.

The quality of the player is equal to the NTSC machines to be found on foreign shores. It's a tad confusing to use, due to an overcrowded handset, but setting the thing up is as easy as plugging in a SCART lead.

All in all, this is a promising start for a potentially massive format.

● DTH-1000	● £600
● Thompson	● Available now



DTH-1000 PAL DVD player, Thompson. Tel: 0181 344 4444

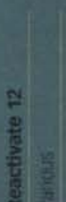
The Fat Of The Land

Prodigy

XL recordings



Breathlessly anticipated by the huge army of indie kids who switched to dance when the likes of Underworld and the Chems rolled into town, Prodigy's third album is, as everyone expected, a full-on headbush of the first order. 'Breathe' and 'Firestarter' are here in all their frightening glory, joined now by the equally scary 'Smack My Bitch Up' and the punky 'Fuel To My Fire'. The constant thudding beats and scorching vocals mean that listening to 'The Fat Of The Land' is more or less a pleasurable alternative to being pummelled by a pneumatic drill. Listen and live in fear.





When you've reached double figures in compilation land, it's time to worry. Unless the dedication to new names keeps the results just as fresh as the first time, that is. So it goes with 'Reactivate 12', burdened with the unfortunate subtitle 'Pulsing Sub-Aqua Vibrations & Thumping Afro Beats'. There's nothing too deep here, granted, but then 'Reactivate' has always been more about delivering pure doses of uplifting Euro techno than redefining the listener's expectations – something 'Reactivate 12' manages with no problem at all.

Gadgets





- MD-MS200H
- £350
- Sharp
- Available now

Sharp MiniDisc player/recorder

MiniDisc has long been heralded as the ultimate successor to analogue tape, and if this Sharp personal player/recorder is anything to go by, the format should soon be storming its way into the British market. MiniDisc already accounts for 65% of all hi-fi hardware sales in Japan, and this trend is likely to establish itself in the Western hemisphere over the coming months.

The Sharp player, which is not much larger than a slightly aged Walkman, makes perfect recordings (recordings so good, in fact, that it's nigh-on impossible to differentiate them from the original CD master) and comes with a pair of in-ear headphones which really are second to none. Battery life is also impressive – you're looking at nine hours of playback from the proprietary battery supplied with the system.

MD-MS200H MiniDisc player. Sharp. Tel 0161 204 2644

Books



Cybertrends

- David Brown
- Viking Publishing
- £18
- ISBN 0-670-86142-1

David Brown has a nagging doubt about the information revolution. As he states, 'At the moment, for all its attractions, the Net remains a hopeful sideshow.' His views find allies in books like 'Silicon Snake Oil', 'Why Things Bite Back' and 'The Trouble with Computers'. Their authors all have a healthy suspicion of the technology that they use every day, and are not taken in by the promise of a silicon nirvana.

The information society has been called a 'global overlay culture', a concept that is at the heart of Brown's argument. He feels that 'the more we "interact" by digital means, the more we are disconnected from each other'.

Brown surveys the current trends and shows where they may be leading us, who will hold power, and what our place may be in the next century when global telecommunications will be a part of everyday life.

As an academic, Brown's prose can be dense in places, but his text is comprehensively annotated – like a sort of printed hypertext – and his slant on our silicon future is fresh and engaging. He has injected some much needed relevance into old arguments.

Young Children

- Jack Sanger
- Falmer Press
- £14
- ISBN 0-7507-0701-1

Many people believe that children who have free access to media in the classroom and at home are being corrupted by this onslaught of TV, games and videos.

Back when the ZX Spectrum was cutting-edge technology and video nasties were available to rent, this argument was eagerly exploited by the media. But as Sanger points out, 'In general, as members of society, we connect media content with consequential behaviour, although we can't prove the causal connections.' In other words, we now know that the legions of violent, emotionally disturbed videogame fanatics the 'Daily Mail' warned us we were creating simply haven't materialised.

Sanger's conclusions will come as no surprise to anyone. The technology departments of our schools are under-resourced and the staff under-trained and uncertain about IT's part in education. In short, no one is certain of the effects of mass media on children during their formative years. But if you would like to check up on the latest research in the field, Sanger's accessible and informative book is a good place to start.





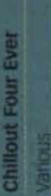
Music







Japanese disc-spinner Cher may not be a familiar name, but the man sure knows his techno. Opening with the slow-building 'The Struggle' from Aquatherium and taking in Electroliner's classic 'Loos Caboose' and 'Kaleidoscope' from Art Of Trance along the way, Cher literally piles on the quality electronica. Of the lesser-known cuts, Freespirit chip in with an Oakenfold-esque crowd-pleaser, while Sungod take things down a global-tinged, piano-powered avenue for a few pleasing minutes. Not quite a classic, but this classy selection of nu-techno cuts is powerful stuff.





Patrick Forge has pulled off an impressive feat here, concocting a languid set without resorting to tedious, whale-noise ambience. The inimitable Kruder & Dorfmeister kick things off with the understated 'Black Baby', while Andrew Weatherall does strange things under the 'Two Lone Swordsmen' moniker. From then on, the mix heads every which way, as Carl Craig, chart-favourites Blue Boy and even guitar-toting oddballs The Egg bring their interpretation of 'chill out' to the party. An eclectic mix, for sure, then, but definitely a thing to be prized.

Netscape: Welcome to Netscape

netview

EDGE TRAWLS THE INTERNET FOR THE LATEST DEVELOPMENTS IN THE ONLINE GAMING SCENE

Retuning the Computer Channel

Although every TV channel and magazine worth its salt is rushing to get online at the moment, only a few are actually making an attempt to push the WWW medium in new directions. One of these is Sky Television's 'The Computer Channel', whose recently relaunched site has been created by Internet specialist Cromwell Media and includes the company's highly promising BladeRunner technology.

According to Cromwell's managing director, **Rob Lewis**, BladeRunner 'provides all the functionality a website is ever likely to require, including Pay Per View, Real Time Tracking of Usage by Session and Member, Real Time Database Connections, On Board Digital Agents, Image Databases, Web Robots on board websites, Database of Images used on site, etc. This means the developer has simply to "suck" in his HTML page designs, choose the functionality required, link to the DBs required and then compile. A suite of applications and daemons will then be created that can run on any Unix box.'

Perhaps the most interesting facets of the technology are the On Board digital agents and Web robots. Digital Agents are smart programs which learn what users are interested in on the site and then give them regular personalised updates via email. The agents gauge this information in a number of ways: on the Computer Channel site, users enter ten key IT words and then receive daily news updates related to their choices, but agents also look at how long users spends looking at a certain articles or simply which pages they choose to read. This, of course, means that users get all the info they need from a site without having to log on and browse aimlessly. At the same time, the site gets all the info it needs about the reader, because the robots report their findings back to the company running it. Slightly Big Brother-esque, perhaps, but no doubt a useful tool for companies in learning the habits of people who log on to their sites.

Web Robots work by a similar principle, except they learn what the site visitor is interested in and then go elsewhere on the Web to find relevant information. Again, these can be consciously directed by the user (who enters keywords for the robots to look out for) or they can record what the reader spends most time studying and enter the Web to search for similar information. This information is then sent to the user via email.

Although BladeRunner would appear most suited to news-based sites, Lewis is adamant that the technology would be useful in game developers' homepages. 'A game developer could use BladeRunner to provide a personalised news service for end users, ie by learning what types and/or platforms a user is interested in and then sending, by email and in-box, details of new games when they are released,' he suggests. 'The game developer could send this information both by email and through the traditional Royal Mail. A game developer could also potentially use the Web Robots internally to collect information on what other developers are releasing and then send emails to specific members of staff to alert them to news as it is published on the Web.'

Cromwell is currently working on several other websites at the moment, but is unable to release details due to non-disclosure agreements.

Ultimately, though, it seems the company's ambitions extend far beyond simply designing interesting, distinctive websites.

'By the time Microsoft set up their Cambridge research facility we expect to have more developers than they have in the UK,' states Lewis. 'We also expect to have a better team, because we offer software engineers the opportunity of writing software which will genuinely change the Internet forever.'





The Computer Channel site mixes information about the channel itself with general IT news

Visit http://computerchannel.co.uk for the Computer Channel's website. Subscription to the service is free

Talking about a Revelation

Released early last year, Studio 3DO's huge online RPG, *Meridian 59*, was one of the first multiplayer Internet games to gain worldwide renown and patronage. Even at the time, though, its visuals looked dated and slow, and the gameplay disappointed and enraptured in equal measures.

The situation was relieved somewhat with the release last month of an update entitled *Vale of Sorrow*, which offered better graphics, new areas to explore, new characters, and a whole new adventure scenario. But Studio 3DO is not stopping there – with the threat of Origin's *Ultima Online* on the horizon, the company has announced a new chapter, *Revelation*, due for release in Autumn. Again, this boasts visual improvements, but adds over 30 new non-player characters (each bearing advanced AI) and an all-new island city to explore which increases the size of the map by 50%. The number of available spells and weapons has also been dramatically increased.

If this latest update is as impressive as prerelease hype suggests, this could be the dawn of a new more era for Internet gaming – a genre which is already becoming the most interesting area of videogame technology.

To find out more about *Meridian 59*, and the *Revelation* update, check out http://www.meridian.3do.com



***Revelation* features a much-enhanced graphics engine and improved character design**

BIG IN JAPAN

THIS MONTH EDGE OBSERVES THE ONGOING FLIRTATION BETWEEN SONY AND THE MUSIC WORLD AND THE DEPRESSINGLY UNSTOPPABLE RISE OF THE TAMAGOTCHI. MEANWHILE, SONY'S JAPANESE ARM SEES FIT TO REWARD ITSELF AND SOME ITS SOFTWARE PARTNERS WITH A SPOT OF BACK SLAPPING

Baby you can sync my music to some odd form of light show thing

After the success of its singular 'rhythm action' game *PaRappa the Rapper* (which sold 750,000 copies in Japan), it was inevitable that SCE would seek to cash in with comparable projects. Thus it was followed soon afterwards by *Depth* – described as an 'aquatic musical composition' game – and now by *Baby Universe*.

Even more surreal than *PaRappa*, *Baby Universe* is essentially a music CD accompanied by a 2D/3D graphics show. The fun bit is that, as players listen to the tunes, they can manipulate the swirling onscreen shapes with the controller – creating their own personalised displays. Later, should users become fed up with the supplied soundtrack, they can use their own music CDs, the graphics changing according to the type of music being played.

Perhaps now is the time for veteran sound/light interface expert Jeff Minter to give up his post-Atari sheep-cuddling and apply for a job at Sony. *PaSpliffie the Hippie* would no doubt thrill the more horizontal PlayStation owners out there...

But it's only a keyring...

As if Tamagotchi nurseries weren't enough, the Japanese can now buy colourful little bags to put their beloved cyber-creatures in. Apparently, the country's more obsessive owners were getting worried about the damage inflicted on their digital pets by rain and general wear and tear – though why they couldn't put the tiny gadgets in the their pockets is anyone's guess...

Still on the Tamagotchi front, Bandai is set to release a Game Boy version of the phenomenon. Mercifully, though, the handheld console's ability to save game data means that owners will be able to switch their pets off from time to time instead of having to pander to the critters' needs 24 hours a day.

However, with many more Tamagotchi-related goods on the way from Bandai there will soon be no escape. And to think, in the '80s everyone thought it would be nuclear war that destroyed the world...

PlayStation facts and figures (to end of May '97)

Total machine sales 16m worldwide; 7.5m (Japan); 4.8m (US); 3.7m (Europe)
Software titles available Japan: 811; North America: 275; Europe: 223
Software units sold Japan: approx. 59m; North America: approx. 30m; Europe: approx 25m
Number of licensees Japan: approx. 540; North America: approx. 180; Europe: approx. 130
PlayStation monthly hardware production 1.5m (compared to the N64 at 1.2m)

Final Fantasy gets its back slapped

On June 11, Sony Computer Entertainment Japan organised the third annual PlayStation Awards Ceremony. After a gigantic introduction with traditional Japanese drums, followed by a performance by genuine Brazilian dancers, SCEJ gave awards to 13 titles.

The titles graced with awards were:
Over 3 million units sold *Final Fantasy VII* (Square Soft)
Over 1 million units sold *Bio-Hazard* (Capcom)
Over 500,000 units sold...
Tokimeki Memorial: Forever with You (Konami)
Tobal No 1 (Square Soft)
Street Fighter Zero 2 (Capcom)
Arc the Lad 2 (SCEJ)
Puyo Puyo Tsu (Compile)
Rage Racer (Namco)
PaRarappa the Rapper (SCEJ)
Crash Bandicoot (SCEJ)
Soul Edge (Namco)
Shin Super Robot Taisen (Banpresto)
IQ (SCEJ)





Baby Universe follows the likes of *PaRappa the Rapper* in Sony's musically aware software catalogue. The title went on sale in late June at ¥4,800 (£25)





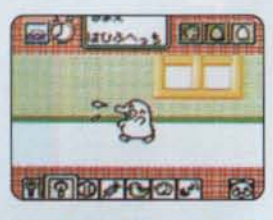






Sony's software awards for 1997 have gone to (clockwise from above) *Final Fantasy VII*, *Bio-Hazard* and *Tobal No 1*







Bandai's Tamagotchi is heading towards the Game Boy in Japan, with a distinctive cartridge casing (above) and familiar decorative border touches onscreen (right)

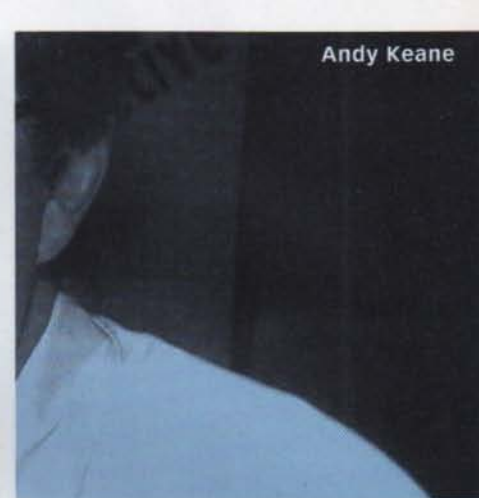


AN AUDIENCE WITH...

3Dfx Interactive

In the rush to provide 3D solutions to the PC games market, one company has raced ahead of the pack. After giving Lara Croft a digital Wonderbra, California-based 3Dfx's Voodoo chipset has quickly become the choice of an industry




Andy Keane

Founded in March, 1994, 3Dfx Interactive has singlehandedly changed the very nature of the PC, turning a business machine with clunky hardware into a powerful games machine with the release of its Voodoo Graphics chipset in October of last year. Since then, amidst universal praise from developers and public alike, the California-based company has gone from strength to strength, its distinctive green logo dominating this year's E3 show. Despite rumours of funding problems, an aggressive competitor in VideoLogic, and the fickle tastes of the PC market, it looks as though 3Dfx is poised to become a household name. **Edge** caught up with **Brian P Bruning**, developer relations manager and **Andy Keane**, VP of marketing, in the 3Dfx suite at E3, to get the full story.

Edge: How did it all start for 3Dfx?

Brian P Bruning: The goal was to develop something suitable for the arcade market and bring it over to the PC, so Voodoo is really an arcade chipset. What happened is that it got pulled into the PC market through its relatively cheap price. To be honest, we got sucked into the PC market quite a bit faster than we'd expected. In fact, we didn't really expect this current chipset to be accepted, as the market is so conservative normally. We thought we'd have to wait until the second set to break through, but it was almost immediately accepted.

Andy Keane: When I first came on the team, I went out there to talk to the game development community, and found that they were actually pretty disappointed with what was out there in terms of these 2D/3D combined solutions. I showed them Voodoo and they said, 'Well, hey, this is what we've been waiting for,' and what we heard from people was 'Why don't you sell this on its own?' The more we thought about it, the more it made sense.

Edge: But it's not without competition. What is it, in your opinion, that gives Voodoo the current edge over other solutions?

BB: Part of it is that the technicians that built it are from SGI, and have all that expertise. It was designed to be better in that we didn't take the standard PC approach. Normally, if you're designing for the PC, you design one chip, it's all integrated, with a 64bit memory bus, but with this chipset, we have two chips, a 128bit memory bus, six address buses, and so on. I mean, it's really nuts what we have in our chipset, but that's what it takes to do fast 3D. Voodoo is not limited by the need to be an integrated solution.

AK: The real advantage that Voodoo has is plain to see: it's the games. It's really that simple.

Edge: You've been extremely efficient at getting developer support. How did you go about selling the chipset to PC developers?

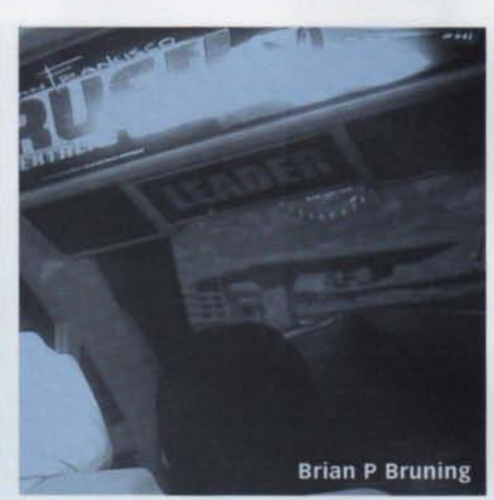
AK: Well, like everyone else who was entering this market about two years ago, we really started by getting out there and just telling people what we were planning to do. We took a pretty conservative approach – we didn't lie to the game developers, we just said, 'This is what we're planning to do, and this is how fast it will go, this is how many polygons-per-second you can expect,' and it was conservative. ▶

'WE'VE TAKEN A PRETTY CONSERVATIVE APPROACH – WE DIDN'T LIE TO DEVELOPERS, WE JUST SAID, "THIS IS WHAT WE'RE DOING, THIS IS HOW FAST IT WILL GO, THIS IS HOW MANY FPS YOU CAN EXPECT," AND IT WAS CONSERVATIVE'


***Out of the Void*, a space shoot 'em up from GameFX, is seen as a showcase title for the next generation of native 3Dfx software**







Brian P Bruning

'THE UK WAS THE FIRST PLACE WE TARGETED FOR GAME DEVELOPERS. DID WAS ONE OF THE FIRST COMPANIES ON BOARD... UK DEVELOPERS TEND TO ADOPT NEW TECHNOLOGIES A BIT FASTER THAN SOME OF THE US DEVELOPERS'

There were other people out there promising the Earth, and we had developers say this to us, and we'd just reply by saying, 'Yeah, but we're not lying.' When we delivered the chip, it was like 'Hey, it's faster than you said it would be,' and we would say, 'Great, so take advantage of it!'

BB: The UK was actually the first place that we targeted for game developers. DID was one of the first companies to come on board, along with Gremlin and Psygnosis. UK developers tend to adopt new technologies a little bit faster than some of the US developers.

Edge: That developer support has been crucial to the Voodoo success. Many of the developers **Edge** has spoken to claim your unwavering support as a big factor in their developing the Voodoo technology. What's so special about it?

BB: The way we look at support is this: whatever it takes to get the game up and running with Voodoo graphics, that's what we'll do. It's very simple. We get out there, talk with their programmers, and maybe leave some technicians there for a while to work the problems through, whether it be Glide-related or D3D or OpenGL, or just the nitty gritty of getting things running the way they designed them to.

Edge: Glide is your direct API – a way of talking to the chip directly – but most developers will be programming with D3D in mind. Does it bother you that they're maybe getting less out of the chip as a result?

BB: We never push anything on a developer. Glide will obviously maximise the features of the card because it writes directly to the chip, but our model is that we have OpenGL and D3D resources which are actually bigger than we provide for Glide, because we understand that developers are working to these standards more often than they are to ours, and also because these systems are a little more sophisticated and people require more help with them. Whatever the developer wants to work with, whether its Renderware or BRender or 3DR too, it's not a problem – we have any of the APIs they may want. Obviously, we're a little more focused on the first three, D3D, Open GL and Glide, but the point is that developers get just as much support if they're using OpenGL as for Glide.

Edge: But the most popular is D3D?

BB: Yes, along with Glide. The thing about D3D is that there's still a lot of controversy surrounding it, with the driver problems, constant revisions and updates and everything, but it's definitely the most popular.

AK: Yeah, I think that everybody is assuming that D3D is the 'catch-all'. You know, they may program specifically for a couple of chipsets, but then D3D comes in and covers all the little guys; the less popular technologies and the combined cards.

BB: We actually took the decision to release Glide publicly, so that anyone could have a go at programming Voodoo themselves. The last time we did a release like that, over the Internet, the demand was such that it brought all our servers to their knees! The result is that we've had developers coming to us, that we've never spoken to before, and where there was maybe a pretty weak 3D engine before, they now have a game running smoothly on our card. The shareware groups are out there,



There was no shortage of impressive 3Dfx titles at this year's E3 event. Electronic Arts' *Longbow 2* looked particularly stunning





and the demo guys are out there, and they're beginning to base their creations on Voodoo graphics. Something like 70% of the submissions that companies like Psygnosis and Virgin, and big publishers like that, are getting from people wanting to get into the industry, are Glide-based – all running on Voodoo.

Edge: Some of the titles **Edge** saw a year ago, with pretty shoddy 3D engines, are now appearing on 3Dfx, with filtered textures, 30fps and so on. Could it be that some developers are just lazy, and that Voodoo is an easy way out for them?

AK: I think there may be an element of that, in some cases. Some developers are lazy, sure, and some maybe just don't have the time or the budget to build an efficient 3D engine from the ground up, so I guess there's a bit of that going on, but, you know, it's where the market is going, and it's where the technology is going. In a couple of years, it may be pretty rare to find games that don't use this kind of technology from the ground up.

Edge: Which game has used the technology best to date?

BB: That's a tough question. What I prefer to do is to break it down into genres, because I don't think it's always fair to compare flight sims with driving games, or *Quake* to *EF2000*, but if I had to pick one for its 'wow' effect, it would probably be *Forsaken* from the guys at Probe. There's also some stuff coming from Rage Entertainment that's just phenomenal. *Extreme Assault* looks incredible, too. I mean, those guys already had an awesome software engine, and now it's accelerated it's just amazing.

Edge: How many 3Dfx titles are there in development?

AK: At least 400 games that we know of. It may be as many as 500. So there's an awful lot of developers working with Voodoo technology.

Edge: It sounds as if the software side is completely covered, but what about hardware? What about selling the card into a market dominated by ATi and S3, whose installed base runs to seven or eight figures?

BB: The difference is that 100% of our installed base play games. Every chip that goes out goes to a game player. A good software title is going to sell, what, maybe 200,000 units? Well, we've got that installed base covered easily, and because the 3Dfx technology works alongside some of these other cards, and because it's just for games, we see ourselves as having a good share of our market – gamers. But we're not at liberty to give out our sales figures right now. A good way to figure how we're doing is to look at how many manufacturers are making Voodoo chipsets and boards. We're seeing more manufacturers from Taiwan coming on-board, as well as the big guys in the West, like Diamond and Orchid. We even have one in mainland China, called 'Elephant 3D', and we have more and more companies waiting to join in, so it's looking very positive right now.

Edge: VideoLogic has just released its PowerVR PCX2 chip, effectively its 'second generation'. When will you release a follow up, and what form will it take?

BB: There seems to have been some speculation over this at E3, and it's partly our fault because here on the ▶

'A GOOD WAY TO FIGURE HOW WE'RE DOING IS TO LOOK AT THE MANUFACTURERS MAKING VOODOO CHIPSETS AND BOARDS. WE HAVE MANUFACTURERS FROM TAIWAIN AND EVEN ONE IN MAINLAND CHINA'



Unreal **from Epic Megagames might be beginning to look a little long in the tooth compared to *Prey*, but it still manages to impress**







◀ stand we have demos running on PCs with dual Voodoo chips. People have naturally assumed that this is some kind of clue to the configuration of the next 3Dfx board, but it's really just a showcase, to show what can be done with the technology. Whether the next generation of 3Dfx will be two chips, or whether we're working on an entirely new chip, we really can't say right now. If we did, we'd be killed, basically!

AK: And the thing is, you haven't really seen the chip pushed to anything like its limits yet, especially in the polygon area. It's been one of the hardest things to evangelise, but we're just starting to get companies designing for 3Dfx from the ground up, and building environments that really use a lot more geometry. Currently, people are designing for around 2,000 polys per frame at, say, 20-25 frames per second, and they're pretty happy with that, but our hardware can do that in a snap, so we're out there educating developers and making sure that when they design the 1998/1999 games, they should be looking at 4,000 polygons per second at 30 frames.

Edge: Is that through your Total Immersion developer program?

BB: Essentially, yes. It was the theme of the Total Immersion developer conference that we held in April. We basically sat down with everyone and said, 'This is what you should be aiming for.' Because we didn't lie to them in the beginning, we have their trust, and to their credit, they're behind us all the way, and pretty excited about the possibilities, and we're sticking with this card for the foreseeable future, so we're not confusing developers or the market by releasing something new every six months.

Edge: Do you think that your card has brought the PC into a more direct competition with the superconsoles?

BB: I think that they're very different markets. Consoles are really plug-and-play, you know, and there are no operating systems to worry about or compatibility problems. Everyone wants to see this convergence, but that's not nature. If anything, divergence is the norm, and these things are separate. Coin-op, console, PC – they all coexist, but they are separate.

Edge: It's been rumoured that you're working with Sega on Saturn 2. Surely, there's some convergence there...

BB: Well, we really can't comment on that, other than to say that we've got Voodoo in the arcades and we might want to take that technology further. It's an area we're obviously interested in.

Edge: You seem to like the idea of divergence, but it can be a pain, surely. You have PowerVR breathing down your neck right now, being very aggressive with 3D technology. What's going to keep you ahead?

BB: I think the point is this: when we go into a developer and they port their game to 3Dfx it runs smooth, it runs clean and it isn't a nightmare for them to program it that way, so we have a huge software library. That is the number-one advantage, I think, that we have over the competition, over PowerVR. Our technology is easy to write to, and it works, and that's why it's the best. There are no developers that I know of that are yanking out their 3Dfx graphics cards to start programming for PCX2. It's just not happening. **E**



***Powerslide*, from Emergent, runs at an impressive 60 frames per second**



Fox Interactive's cutesy platform game *Croc* rivalled N64 quality with its crisp graphics and smooth frame rate, courtesy of Voodoo

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PRESCREEN ALPHAS

As the Electronics Entertainment Expo groaned under the weight of 3Dfx titles, one in particular hinted at the as-yet-untapped potential of the Voodoo chipset. **Powerslide**, developed by Australian codeshop Emergent, is still at demo stage, but already looks incredibly impressive. It's an off-road buggy racing game that runs at 60 frames per second, and the version **Edge** witnessed at the recent E3 show had a texture quality and smoothness that might normally be associated with Sega's Model 2 classic, *Sega Rally*.

Pop-up problems caused by overloading the processor with geometry are kept to a minimum thanks to Emergent's load-management technology which smoothly morphs the environment models from simple shapes to detailed features as the player approaches. The game is still extremely early in its development cycle, and is yet to find a publisher, but the fact that Emergent is developing *Powerslide* from the ground up to be a 3Dfx-only title is an encouraging sign, and bodes well for a PC software line-up in 1998 that has more than filtered textures on offer to demonstrate the true power of dedicated 3D acceleration technology.





Powerslide, from Australian codeshop Emergent, represents perhaps the current apex of 3Dfx






Messiah is certainly unique. Only Shiny Entertainment could dream up a game where the player assumes the role of a body-snatching cherub





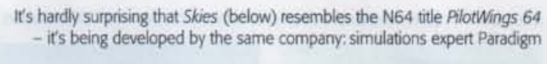

Despite its problems at E3, John Romero's *Daikatana* (right) can still lay claim to possessing some of the most realistic environments around, courtesy of its licenced *Quake* technology. What everyone is waiting for, though, is the accelerated version


Violent Seed, from Rabid Software, is a top-down PlayStation shoot 'em up


Blasto, for the PlayStation, fails to impress, despite the big E3 push

A title demonstrated behind closed doors at E3, where it caused the kind of reaction that seems to accompany every game developed by the warped minds of Shiny Entertainment – that is, a mixture of admiration and mild amusement – **Messiah** sees players taking control of a cherub which roams around a futuristic 3D world looking for bodies to inhabit. Add to that the self-publicised inclusion of 'the first motion-captured dwarf' and, once again, Dave Perry and his merry band are gearing up to take the PC even further into the surreal.

It's hard to see why, at this stage, but **Blasto**, from Sony's in-house American development team, has garnered an incredible amount of interest this past month. It had pride of place, along with *Crash Bandicoot 2*, on the all-encompassing Sony stand at E3, but left **Edge** wondering what all the fuss was about. Its construction seemed to be simplistic *Bubsy 3D*-style environments and plain-shaded polygons, with hardly a texture in sight (although they are planned for the finished game). Sadly, **Edge** came away with the impression that *Blasto* looked little more than a Net Yaroze demo...


It's hardly surprising that *Skies* (below) resembles the N64 title *PilotWings 64* – it's being developed by the same company: simulations expert Paradigm




Will *Sid Meier's Gettysburg* prove to be as addictive as *Civilization*?


Xenocracy, from Grolier, is a space-based shooter by Simis

As the 3Dfx bandwagon gains momentum, the number of native titles is increasing. **Out of the Void** (see **E**46), from GameFX, is one such title. A playable version was on show at E3 and impressed with its uniquely aesthetic interpretation of the space shoot 'em up.

SegaSoft's **Skies**, which resembles *PilotWings 64*, was ▶




GameFX has created a shoot 'em up of considerable beauty with *Out of the Void*, which took pride of place, alongside *Quake 2*, in the 3Dfx suite at E3






These shots from EA's *Longbow 2* may look prerendered, but they're most definitely in-game 3Dfx

Interstate '77, from Activision, is due for Christmas, this time with 3Dfx support





Saturn *Quake* mimics the PC original



As does Saturn *Duke Nukem 3D*



shown running on the experimental SLI board behind closed doors in the 3Dfx suite. The final version will be compatible with the standard Voodoo chipset, and appears to have RPG aspirations, as well as a multiplayer mode.

Meanwhile, on the EA stand (inside a mocked-up cockpit), **Jane's Longbow 2** showed how a previously clunky engine could find a new lease of life courtesy of the Voodoo chipset.

Sid Meier has returned with his first title under the auspices of his new codeshop, Fireaxis. **Sid Meier's Gettysburg** may not look much compared to the 3D excesses that dominated the PC stands, but it's almost certain to prove as maddeningly addictive as its *Civilization* forebears.

With *Quake 2* already on the horizon for PC owners, the original title has certainly taken its time to filter down to 32bit consoles. It's well on its way, though, and as these screenshots show, the Saturn conversion (due at the end of October) is incredibly faithful, both in terms of visual quality (although here the resolution is lower than most PCs are capable of) and level layouts. Despite the huge differences between the two platforms, this faithfulness can be put down to Lobotomy's prior experience in creating the excellent firstperson shoot 'em up *Exhumed* (which may soon be heading N64-wards if industry talk is to be believed).

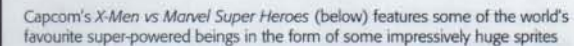
Lobotomy's Saturn conversion of 3D Realms' PC bestseller **Duke Nukem 3D** is also looking very accomplished. Again, all ▶







Jaleco's *Dead or Alive* coin-op is about to make the leap to both the PlayStation and Saturn (above). Though the coin-op was never a premier title, its licenced Model 2 visuals made it a looker, and it played a pretty sound game



Capcom's *X-Men vs Marvel Super Heroes* (below) features some of the world's favourite super-powered beings in the form of some impressively huge sprites







Capcom's PlayStation conversion of *Street Fighter EX* is looking smooth and fast, although the weaknesses of the coin-op do not appear to have been addressed











Sega's latest Saturn title *Panzer Dragoon Saga* is nearing completion. The battle sequences are turn-based, but they're graphically exciting and atmospheric







Tight, twisted camera angles, Romero-esque burning zombies and 'Aliens'-style guns make *Resident Evil 2* look even more cinematic than its predecessor. A demo will be included with the *Director's Cut* edition in September (Japan/US)











F-Zero 64 carries on from where the original left off, adding more vehicles and stomach-churning courses. N64 owners will be slavering already







◄ the levels from the original are present and faithfully reproduced, and Lobotomy has even added a whole new level for the Saturn release, with NetLink support (in the US) allowing for a twoplayer 'DukeMatch' mode.

The long-awaited **F-Zero 64** is yet another classic SNES title being given the 64bit treatment in-house at NCL, and will feature more than eight vehicles as opposed to the original's choice of four. New features will include a twoplayer battle mode, and players will have to deal with banked turns, loop the loops, and corkscrews which crop up throughout the game's 20 tracks. While early screenshots reveal a distinct lack of trackside detail (though Nintendo would counter this claim by citing the game's setting – high up in the clouds above a city), the game runs at an extremely fast pace (the hovercars can travel in excess of 900km/h) and a super-fluid 60fps update.

Nintendo has also released more shots of **Zelda 64**, along with some snippets of information. The 3D combat action in *Zelda 64* (the cartridge version, due in Japan in November/December) will allow players to switch between first and thirdperson perspectives, while, disappointingly, interior sections look to be presented in a static fashion rather like the environments of *LBA2*. ∎





Konami's 3D RPG adventure *Hybrid Heaven* (above), was shown in prerendered form on video at E3. Will it be the N64's answer to *Tomb Raider*?











Nintendo showed more of *Yoshi's Island* on video at E3, revealing a bundle of characters carried over from the original and bolstered with 64bit power

PREY

ALTHOUGH IT HAS ALREADY BEEN TWO YEARS IN DEVELOPMENT, 3D REALMS' INNOVATIVE FIRSTPERSON SHOOT 'EM UP STILL HAS A THIRD – AND VERY PROBABLY MOST IMPORTANT – YEAR OF WORK AHEAD OF IT



Despite *Prey*'s huge environments, amazing textured surfaces and reflections, the game's engine maintains a healthy frame rate throughout

Firstperson shoot 'em ups are fast becoming as over-popular on the PC as driving games are on 32bit consoles. *Quake II*, *Hexen II*, *Daikatana*, *Unreal* and *SiN* are just some of the recent pretenders to the throne first seized by *Doom* way back in 1993.

However, unlike those games, *Prey* doesn't make use of the BSP (binary search partition) technology associated with the genre, relying instead on 'portal' technology. Portals are 2D window-like shapes through which the player can pass into a completely different 3D environment. The engine allows portals to be dynamically created and placed anywhere in the game.

This device allows optical illusion-style effects to be introduced. For example, the game can delude players into thinking that they are exploring a set of three rooms when in fact there are only two, with a portal used to 'loop' them together. Another optical illusion is best described as the 'Tardis syndrome', whereby a room which seems

Format:	PC
Publisher:	GT Interactive
Developer:	3D Realms
Release:	1998
Origin:	US







Players will have to keep a constant check on their surroundings, as they may be ambushed at any time

















Like many N64 titles at E3, *Zelda 64* was shown running on video. Of particular interest are the room interiors (right), which are viewed from a top-down perspective. The game is expected to debut at the November Shoshinkai show, and go on sale in Japan in December. The US release will follow in March '98, with a UK version expected shortly afterwards









Due to the use of portals, not everything in *Prey* is as it first seems. The technology can play havoc with the dimensions of rooms and corridors





Prey's lighting engine is put to good use for explosions (top). Weapons are constructed from polygons and thus react to light changes (above)

small from the outside opens up into a impossibly vast space once the player steps inside. The overall effect is startling.

3D Realms' new approach has significant gameplay implications. Players will be able to shoot through portals to confront opponents who are on a completely different part of the level, or appear right behind them to launch a surprise attack.

The technology can also be put to other uses. Gorgeous reflecting surfaces can be created by placing portals on the floor and then making them 'solid' so players can't move through them. And because the system isn't processor-hungry, it has little effect on the game's frame rate, with the result that *Prey* moves at a fair old clip.

Another equally impressive aspect of the game, adding greatly to the sense of realism, is its lighting engine, which boasts a 16bit colour palette generated from six lights, and very subtle shadow edges.

As for the storyline, the game's developer, 3D Realms, is keen to emphasise that *Prey* is a serious science-fiction adventure, without the over-the-top or tongue-in-cheek elements of some of its rivals. The player takes control of a character

PLAYERS WILL BE ABLE TO SHOOT THROUGH PORTALS TO CONFRONT PLAYERS ON A COMPLETELY DIFFERENT PART OF THE LEVEL, OR APPEAR RIGHT BEHIND THEM

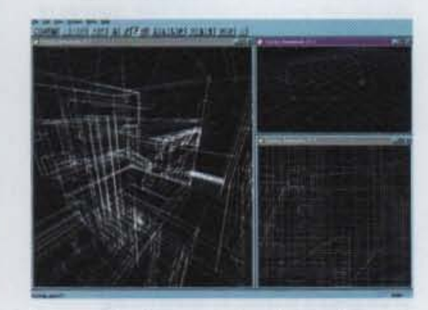
called Talon Brave, a Native American who is abducted by the Trocaran species and finds himself fighting for his life inside their gigantic mothership. As the game progresses, the plot thickens, and it soon becomes clear that things are not quite as straightforward as they first appear.

Because a conventional 3D engine would not be able to deal with portals, *Prey's* engine is written directly to hardware, which means that players will have to furnish themselves with a 3Dfx-or-compatible 3D accelerator card before they can experience it.

The new technology undeniably has a great deal of potential, but as always, the big question remaining is whether the gameplay can make full use of it. E



Prey features some highly impressive lighting effects – the game often exudes a prerendered look, even though the graphics are all in realtime



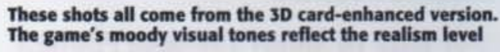
3D Realms is expected to license the impressive portal technology used in *Prey*

SPEC OPS US ARMY RANGERS

THE FIRSTPERSON SHOOT 'EM UP SCENE SEEMS RESOLUTELY ENSCONCED IN THE FANTASY REALM. SEATTLE-BASED ZOMBIE, HOWEVER, IS ONE COMPANY DETERMINED TO INJECT THE GENRE WITH A SHOT OF BULLET-RIDDLED REALISM







These shots all come from the 3D card-enhanced version. The game's moody visual tones reflect the realism level





Each of the game's vehicles is based on a real-life military model

First covered in **E**44, this firstperson combat game from Seattle-based Zombie is the first in a series featuring Special Forces operations, with the emphasis firmly placed on action and realism.

Players will find themselves exploring huge outdoor 3D environments and in control of a team of rangers responsible for the elimination of enemy targets while simultaneously carrying on sub-missions, all within the stressful confines of the strict time limit imposed.

The five mission levels, each with four sub-assignments, will vary considerably from one to the next, and include seize-and-destroy sorties, counter terrorist attacks, and hostage rescue situations in different areas of the globe. However, unlike other games of this type, there will be an element of strategy involved, and players charging in with guns blazing will severely hamper their chances of seeing the end credits.

Although only one of the six team members is controlled, the other rangers react intelligently to the player's actions, instigating the enemy into combat, and providing forms of back-up, such as kicking down doors and standing guard while the player searches the building.

To ensure realism, Zombie's development team obtained advice on the level design from Special Forces units together with photographs in order to authentically reproduce the clothing, vehicles, weapons and equipment present in the game, as well as witnessing ranger and light infantry practice exercises to get the feel of actual combat and the teamwork involved. Furthermore, the audio content was recorded from real weapons being fired.

This attention to detail certainly seems to have paid off. If the gameplay matches the impressively realistic visuals, *Spec Ops* will prove to be a welcome expansion on what is an overexposed genre. E



Character animation is based on motion-capture data to heighten the realism

Format:	PC/PlayStation
Publisher:	BMG Interactive
Developer:	Zombie
Release:	Autumn
Origin:	US

THE REAP

Scandinavian softco Housemarque was responsible for Super Stardust, one of the finest blasters on the Amiga. Now it is looking to bring its considerable expertise to the PC with a stylish Zaxxon-style shooter









Bearing distinct similarities to isometric 3D classics *Zaxxon* and *Viewpoint*, *The Reap* is a promising attempt to bring the scrolling shoot 'em up to the PC





The backgrounds are intricately detailed and employ spectacular lighting effects

Format:	PC
Publisher:	Gametek
Developer:	Housemarque
Release:	November
Origin:	Finland

Developers attempting PC shoot 'em ups in the past have often lacked experience in the genre, unaware of its finer points, resulting in a number of wholly forgettable efforts. The system's architecture hasn't helped the cause, its comparatively weak 2D capabilities being detrimental to design endeavours. Helsinki-based outfit Housemarque, however, is aiming to overturn this poor state of affairs with its forthcoming shooter, *The Reap*.

From the early demo **Edge** has played, signs are positive. The backgrounds are detailed and interesting with a hazy industrial look reminiscent of 'Alien 3', and the explosions are brilliantly cinematic in both size and bassy resonance. Although the game is not supporting any accelerator cards, in terms of speed Housemarque has assured **Edge** that a decent frame rate will be retained throughout due to its sound graphics engine. Scandinavian coders are renowned for their programming resourcefulness, and Housemarque's previous computer shooter, the Amiga classic *Super Stardust*, lends credence to the codeshop's claims, which include 400 objects on-screen with no significant slowdown.

Housemarque is even attempting some innovative touches. For example, rather than appearing in mindless formations, enemy ground troops use AI. Consequently, they try to strategically guard important buildings, but run away from explosions and adopt 'every man for himself' tactics if the player shoots a commanding officer.

It seems that *The Reap* has much in its favour. If the programming talent behind the game is astute and creative as it was back in the Amiga's heyday this could be a great title. In fact, Housemarque may even convince other PC developers that *Quake* should not be the only source of inspiration when it comes to shoot 'em ups. And that *would* be a remarkable achievement.







***The Reap* contains around ten levels, some containing huge cogs, wheels and other industrial detritus, giving the game a highly distinctive look**

BANJO-KAZOOIE

THE ADAGE 'WHERE NINTENDO LEADS, OTHERS FOLLOW' APPEARS TO BE HOLDING TRUE, AS RARE PREPARES TO DELIVER A 3D PLATFORM GAME WITH MORE THAN A PASSING SIMILARITY TO SUPER MARIO 64





The scale of each level – which appears to rival that of *Super Mario 64* – becomes evident when Kazooie takes to the skies (top left). Though the levels use similar structures to those of the N64's premier title, rich textures are used more abundantly, making for more realistic-looking terrain (above right)




A voodoo doctor turns characters into insects (top). The duo collect musical notes (above)

Format:	Nintendo 64
Publisher:	Nintendo
Developer:	Rare
Release:	Autumn (US)
Origin:	UK

It was, of course, only a matter of time before developers attempted to ape the values of what is perhaps the greatest game in existence – *Super Mario 64*. Despite Nintendo setting such a clear example of what makes a fine game, though, no doubt many will fail miserably (indeed, Japanese developer Epoch already has, with *Doraemon* – see review, **E**45).

However, Nintendo-friendly Rare has jumped ahead of the opposition and shown a probable hit title that gathered much deserved attention at the recent E3 event.

Banjo-Kazooie features a bear (Banjo), carrying a bird (Kazooie) in a rucksack, and the two roam freely through a 3D world collecting blue eggs, avoiding hazardous terrain, and defeating enemies. The game's bright primary colours and cartoon look evoke a strong *Mario*-esque feel, yet the resemblance isn't purely cosmetic – after a few minutes' play, *Banjo-Kazooie* proves it may have the potential to be as immersive an experience as Nintendo's masterpiece.

In a similar fashion to one of Rare's earlier games, *Donkey Kong Country*, players are encouraged to swap between the characters in order to progress efficiently through the game. As a result, use must be made of Kazooie when flying is required to ascend a seemingly impassable obstacle such as a mountain; similarly, Kazooie proves most able in water, where his wings double up as an effective method of propulsion.

Furthermore, encountering a voodoo doctor will see the eponymous duo changed into an ant like insect, capable of scaling vertical walls in order to find hidden bonus items such as extra lives, musical notes and puzzle pieces.

The animation is as fluid as anything yet seen on the N64, and characters possess a wide range of moves for players to master. Despite its close visual relationship with *SM64*, then, this could be one of the strongest secondparty games of '97. **E**



The banjo and kazoo references of the title appear to be reserved for an intro screen (where the two characters play them), and not in the game

CONKER'S QUEST

IT WOULD APPEAR THAT ONE SUPER MARIO 64-ALIKE ISN'T ENOUGH FOR RARE, WHOSE ROSTER FOR 1997 IS BEING BOLSTERED BY A TITLE SOAKED THROUGH WITH CUTE. IS THIS MR NUTZ: THE 3D REMIX?





Conker the chipmunk must collect nuts in a variety of environments, although some help will be at hand in the form of a female of the species (main)



Rare is hoping that Conker's colourful world will appeal to the younger N64 audience

Not content with releasing one *Mario 64*-alike, Rare has decided to work on two simultaneously. As a result, *Conker's Quest* (which will be the first game to be published under the Rare banner for years) looks a lot like *Banjo-Kazooie*, and its gameplay is equally similar. While this may be no bad thing, differentiating between the two titles proves difficult at first.

Looking rather like a 3D version of humdrum 16bit platformer *Mr Nutz*, *Conker's Quest* appears to be aimed at a younger audience than Rare's other N64 platformer, and has Conker helped along by a female squirrel in fighting off gigantic enemies within equally vast landscapes.

Indeed, the view impresses most in the way it casts out into the distance, *Mario 64*-style, generating near-cartoon-quality visuals which set a new benchmark for the 64bit machine. *Conker's Quest* also scores another point over the bear-and-bird duo's game with its superfluous details – the water within its levels is more realistically animated, for example, and it seems to maintain a more uniform cartoon-esque feel. Also, Rare's designers appear to have given Conker a wider breadth of actions thanks to a number of collectable costume-based power-ups.

The game is at an earlier stage of development than *Banjo-Kazooie*, though, and certain aspects, such as camera angles, will need attention if the game is going to compete against the Nintendo-published title. Ironically, the latter could prove *Conker's Quest*'s biggest adversary.





Comparisons will no doubt be made with *Banjo-Kazooie*, Rare's other N64 platformer, and indeed, in terms of gameplay at least, the two games are similar. Visually, however, *Conker's Quest* may have the edge, with prettier spot effects (right)

Format:	Nintendo 64
Publisher:	Rare
Developer:	In-house
Release:	December (US)
Origin:	UK

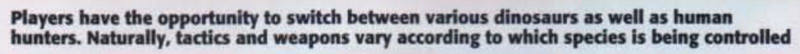
THE LOST WORLD

WILL THE 'GAME OF THE FILM' BASED ON THE SEQUEL TO STEVEN SPIELBERG'S DINOSAUR EPIC 'JURASSIC PARK' FAITHFULLY RECREATE THE ATMOSPHERE OF ITS BIG-SCREEN INSPIRATION, OR IS IT JUST A LOST CAUSE?









Players have the opportunity to switch between various dinosaurs as well as human hunters. Naturally, tactics and weapons vary according to which species is being controlled



There are 20 different dinosaurs in the game. All are based on the actual models used in the movie



The film licence appears to be back in vogue at the moment, with *Mission: Impossible*, *The Fifth Element* and *Blade Runner* all in development. It remains to be seen, however, whether gamers will welcome this trend or not...

Lost World, based on Spielberg's 'Jurassic Park' sequel, is also joining the throng. In its current incarnation, the game sounds very similar to the film: light on plot, heavy on action. The player is responsible for five characters – a tiny compsognathus dinosaur, a raptor, a human hunter, a T-Rex and a human scientist – whom he has to control at various points in the game. His task is simply to keep them alive in the teeth of attacks from a range of ravenous prehistoric monsters and human trespassers.

Interestingly, developer Dream Works has elected for a thirdperson viewpoint and a left-to-right scrolling platform design. This approach might sound slightly dated, but judging by the demo seen at the E3 show, the 25 different environments are detailed and diverse, and, like the characters, have been constructed in full 3D in order to lend the game a respectable veneer of reality.

As might be expected from a title developed in close conjunction with Spielberg himself, a great deal of visual inspiration and technical knowhow can be directly attributed to the movie. For example, the 20 or so dinosaur species are accurately modelled on their cinematic brethren and constructed using the film's new *Morf-X* animation technology. As a result, the dinosaurs move remarkably realistically: skin stretches when they move, and all can call upon a range of movements, including running, walking, jumping, slashing and no doubt dining on those unfortunate enough to cross their path.

Predictably, Dream Works' intention is obviously an accurate reconstruction of the Spielberg epic, and realistic dinosaur modelling, a sweeping orchestral soundtrack and some effective dynamic lighting effects should attract fans of the movie. For everyone else, the option to control the dinosaurs instead of the hapless humans should lend the game an extra appeal. Controlling a T-Rex as it tucks into a jeep full of hunters sounds great fun. E

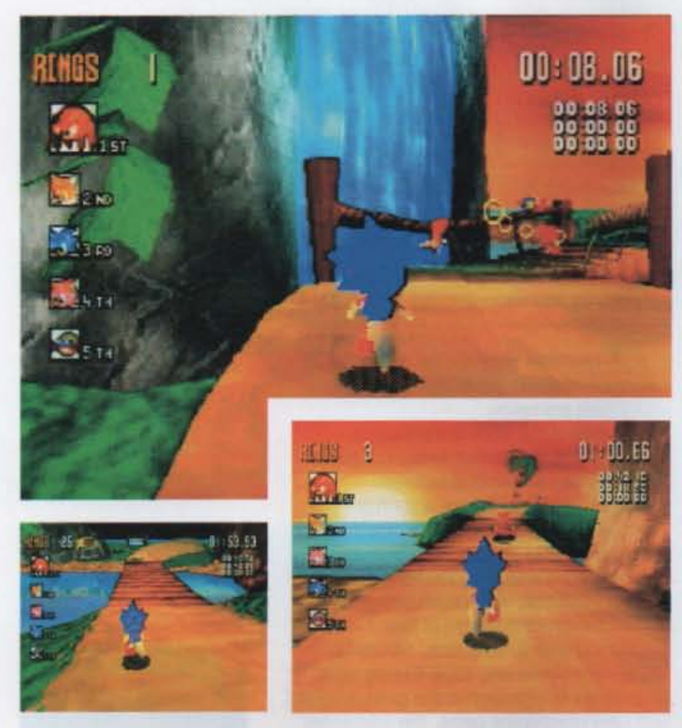


Although most of the gameplay seems to take place in the scrolling foreground area, the background is lavishly detailed and eerily convincing

Format:	PC/PlayStation
Publisher:	Dream Works
Developer:	Electronic Arts
Release:	August
Origin:	US

SONIC R

Once so famously a ubiquitous aspect of videogame culture, Sonic the Hedgehog has been conspicuous by his absence in the modern-day console era. Now, however, Sega is preparing to relaunch the spiky mammal's career



Sonic R **isn't being developed in-house at Sega in Tokyo, but hardcore gamers will have plenty of faith in developer Traveller's Tales' pedigree**



Can the *Sonic* brand rebuild its weight with what is essentially a racing game?

The Sonic character, once effectively Sega's mascot, has so far failed to make a significant appearance on the Saturn. Of course, there was *Sonic 3D*, converted almost intact from the Mega Drive, but it was something of an afterthought. Now, however, British developer Traveller's Tales is aiming to restore the cobalt-coloured mammal's reputation with *Sonic R*.

The game has the potential to become a key Saturn title. Not only does it star Sonic – one of videogaming's true stars – but it is also an interesting hybrid of racing game and platformer. Sonic and four other characters (Tails, Knuckles, Emmy and Dr Robotnik) have to blaze through five large 3D worlds, picking up rings along the way and using their own special skills to get ahead of competitors. Sonic, for example, can use his spinning attack to wrongfoot the other racers, while Dr Robotnik has the unique ability to make shortcuts through lakes and rivers.

But Sega is keen to point out that *Sonic R* isn't just another racer. The five worlds on offer hide a number of alternative routes, shortcuts and secrets which players have to discover in order to improve their times. There are also plenty of obstacles to jump on and over, which give the game its platform feel – even the famous loop-the-loop from the original *Sonic the Hedgehog* is here.

Traveller's Tales has retained *Sonic*'s usual brash, simplistic colouring but added a 3D realm crammed with scenic detail, as well as a few clever graphical effects. For example, objects in the distance don't pop in as they do in many Saturn games but 'fade' in gradually, preventing the usual visual jar.

Some may bemoan the fact that not only is Sonic's first 32bit-only appearance a radical departure from his previous adventures but it is also a racing game – one of the most over-subscribed genres on the Saturn. However, given the game's platform elements, its visual style and the promised wealth of secrets, the new approach should please most comers and provide a much-needed fillip for the Saturn, which is currently still losing its battle against Sony and Nintendo.

Format:	Saturn
Publisher:	Sega
Developer:	Traveller's Tales
Release:	TBA
Origin:	UK





In keeping with *Sonic* lore, players are encouraged to collect gold rings throughout



Many familiar *Sonic* characters appear in this new Saturn outing. Tails, for example, appears in an apparently less-than-sporting mode of transport

JOE BLOW

Polygon-driven platform-game developers no longer seem scared to explore the third dimension. The '2.5D' era is passing; welcome the new breed, including this from fledgling UK outfit, Abstract







Abstract has incorporated plenty of animations, such as Joe tying his shoelaces (top), in an attempt to maintain the game's cartoon approach



Players will have to venture into some distinctly less-than-savoury locations

Having given gamers hedgehogs, bandicoots, and lizards, to name but a few, in recent years, there will surely come a point in the near future when software companies exhaust the animal kingdom in their search for specimens to deliver as convincing game characters. Until then, though, *Mario 64*-alikes look set to retain fur-clad creatures as their centrepieces.

PC and PlayStation title *Joe Blow* is no exception, featuring a ten-year-old monkey who blows on his enemies, defeating them with his breath.

The task ahead of him is reminiscent of that of *NiGHTS*: Joe must save the Queen of Dreams, who has been kidnapped by the evil Nightmare King and invaded Dreamworld, resulting in sleeping children being traumatised by disturbing nightmares instead of having the comfort of peaceful dreams.

In ridding Dreamworld of its malevolent new ruler, Joe must jump, run, and blow his way through six worlds containing more than 60 levels full of humorous opponents such as Cyril the Cuban Cactus, Barry the Blowfish Buzzard and Zebedee Zombies.

The real 3D world system has been designed so that Joe interacts realistically with his surroundings. On a steep slope, for example, instead of just standing there as if the surface were flat, he'll either walk or slide down it. Likewise, tripping over small objects will slow him down, complete with the appropriate animation.

Joe Blow is the work of Abstract Entertainment, a Braintree-based codeshop formed by two ex-Sensible Software employees, Stoo Cambridge and Chris Denman, after they decided that 'the industry had become stale and boring'.

The game's lead programmer is 18-year-old **Tim Wharton**, who began coding on a ZX Spectrum at the tender age of four.

'*Joe*'s engine is really nice,' he claims. 'It's all 16bit colour and 100% floating point [and] all of the animation in the game is done with keyframed spline paths. The animations only take up a little bit of RAM and they look nice and smooth – we can just plonk an animation into the game straight from *LightWave* and it'll look the same.'

The 3Dfx-accelerated version in particular is currently looking graphically impressive, with slick textures and levels built using convincing elements. Yet a few minor bugs remain to be resolved before the game can be called complete, as Wharton reveals: 'You think you're done, then you see a flying zombie indecently assaulting a choir boy in the Abbey of Orra...'

Format:	PC/PlayStation
Publisher:	Telstar
Developer:	Abstract Ent.
Release:	September
Origin:	UK





Jumping on crates will, of course, be essential



All these shots are from the PC 3Dfx version. Clearly, great emphasis has been placed on giving *Joe Blow* a very cartoon-like graphical style

QUAKE 2

THE SEQUEL TO ONE OF VIDEOGAMING'S LEGENDS IS NEARING COMPLETION, ITS CREATOR EXPLOITING 3DFX TECHNOLOGY TO REDEFINE THE FIRSTPERSON STATE OF THE ART. CAN ID REALLY MEET THE INCREDIBLY HIGH EXPECTATIONS OF PC GAMERS?



***Quake 2*'s enemy characters consist of around 600 polygons, compared to the original's 150. 3Dfx acceleration ups the visual ante quite significantly**







The graphical leap from *Quake* to *Quake 2* is vast, with bolder, more complex environments



Format: PC
Publisher: Activision
Developer: Id Software
Release: November
Origin: US

It was almost the game of the show. As the doors opened at E3 in Atlanta and the crowds poured in, they split into broadly three groups: those who wanted to see *Tomb Raider 2*; those pining to get to grips with Rare's latest N64 endeavours in the form of *Banjo-Kazooie*; and, significantly, the press and industry figures who headed straight for Activision's stand, eager to witness the second coming of *Quake*, one of the most influential PC games ever.

The judgement on what was found varies depending on whose views are being considered, and, crucially, their own preconceptions of what *Quake 2* would offer. The common opinion was that it looked great, but offered simply more of the same – more corridors, more moody lighting and more dumb bad guys lining up to be gunned down. **Edge** spent a good half an hour at Activision's stand playing *Quake 2* and came away with the conclusion that this opinion seems not too far off the mark.

Visually, the game met and, in some respects, exceeded expectations. The *Quake 2* engine, accelerated with 3Dfx technology, has given id the freedom to include many of the features that were dropped in the original, namely realtime dynamic light sourcing, shadows and transparencies. The filtering afforded by the Voodoo chipset has smoothed away the jarring pixellation that so plagued *Quake* and its ilk, and the hi-colour facility has done away with the over-abundance of brown hues that muddied the original's complex interiors.

But perhaps the most obvious improvement is the increased detail evident in enemy models. Id was one of the first developers to use the 'soft-skin' texture technique, wrapping one single, elastic texture over the polygon frame of the creatures instead of texturing each individual limb. Though economical, the low polygon count of *Quake*'s models left a great deal to be desired. The new models consist of around 600 polygons each (as opposed to the original's 150-per-model count) and are smoothly animated. All this explains the first half of the opinion – that *Quake 2* does indeed look stunning.

That it was also 'more of the same' in a show swamped with firstperson shoot 'em ups is perhaps a result of the E3 demo version's alpha status.

Without enemy AI in effect, playing *Quake 2* on Activision's stand was something of an exercise in futility, merely sightseeing. They were great sights, as everyone agreed, but the real test for id will be bringing something new to the genre when its much-anticipated sequel is rolled out in November. The hugely revered softco will need to deliver in grand style if it is to retain its reputation. ■



The game's lighting effects are sublime

TOTAL DRIVIN'

THE PLAYSTATION HARDLY YEARNS FOR ANOTHER DRIVING GAME, YET DEVELOPER EUTECHNYX IS CONFIDENT ITS TITLE HAS SOMETHING NEW TO OFFER PLAYERS RAISED ON A DIET OF ARCADE-STYLE RACERS









A multitude of tracks, based all around the world, provide the player with the challenge of getting to grips with all manner of different road surfaces, while the various racing categories add to the task, each vehicle possessing contrasting handling characteristics, thus necessitating different approaches







The game's cars are based on a real models

Format:	PlayStation
Publisher:	Ocean
Developer:	Eutechnyx
Release:	September
Origin:	UK

Another month, another excuse for PlayStation owners to engage in a high-speed activity that might otherwise get them into trouble with the law in real life.

However, rather than simply imitate previous examples from the PlayStation's vast racing-game library, Ocean's *Total Drivin'* offers four distinctly different types of vehicles – sports, Indy, off-road, and rally – to race within the confines of a 3D environment. The 40 cars available include models from manufacturers such as Ferrari and McLaren, and the 36 tracks cover six geographical areas spanning the corners of the world.

As players advance through the courses, new obstacles such as boulders, jumps, and even weather have to be negotiated while attempting to stay ahead of the seven CPU-controlled opponents. Alternatively, two or four players can engage in head-to-head competition via the game's split-screen and link-mode options.

Developer Eutechnyx has gone to great lengths to ensure the realism of the car models isn't purely cosmetic. A comprehensive physics model ensures four-wheel independent suspension, correct aerodynamics and realistic handling depending on the car in use and the terrain it is travelling on.

The game's most impressive feature looks to be its 3D engine, which draws far into the distance with little evidence of pop-up. Eutechnyx has developed a coding tool that calculates the view the driver would see from the car and draws those graphics accordingly. As the car changes, so does the view, therefore preventing the old nemesis of racing games from making an appearance.

If its component parts meld successfully, *Total Drivin'* could represent a breath of fresh carbon monoxide for what has become the most stifled of genres. E



Refreshingly, the game's 3D engine draws far into the distance without great evidence of pop-up, despite large expanses of textured surfaces

KAZE NO KLONOA DOOR TO PHANTOMILE

BIG-LEAGUE ARCADE MASTER NAMCO HAS BROKEN ITS COIN-OP CONVERSION TRADITION AND FORGED AHEAD WITH AN ORIGINAL PLAYSTATION TITLE THAT'S ABOUT AS FAR AWAY FROM THE LIKES OF RAGE RACER AS COULD BE IMAGINED









Although these screenshots may give the impression that *Klonoa* is a 3D game, the action actually takes place entirely in 2D. The effect is achieved by combining varying camera angles with bold, pseudo-3D backgrounds





Some regions are in marked contrast to the gaudy outdoor levels

Format:	PlayStation
Publisher:	Namco
Developer:	In-house
Release:	December (Jap)
Origin:	Japan

Namco is, of course, best known to PlayStation owners for successfully converting many of its impressive catalogue of coin-ops to Sony's machine. *Kaze No Klonoa* marks a shift in focus for the videogames giant, however, as its first platform game for years.

Klonoa, the game's main character, is a very curious-looking boy with wings – a characteristic which is apparently usual, if not essential, among inhabitants of his home, the Village of Wind. The game's plot centres around his quest to find the legendary land of Phantomile, which is rumoured to have existed hundreds of years previously. This task is eased somewhat by a fairy-like entity called Huppo and a magic ring which he can use to defeat the enemies he encounters in his travels. Klonoa is also able to engage some of the game's characters in conversation in order to obtain information which will help him complete his journey.

Although the camera view and backgrounds combine to give the impression of an extra dimension, *Kaze No Klonoa* is very much a 2D-gameplay title. This approach stems from Namco's belief that 2D platform games are easier and more intuitive to play. The camera, which follows Klonoa through the game's six garishly realised worlds, broken down into 21 stages, switches viewpoints to best suit the action on-screen.

The commercial success of games such as *Crash Bandicoot* and *Pandemonium* has proved that a substantial market exists for titles which wrap tried-and-tested gameplay values in pretty packaging (the latter title proving a monster hit in Japan when released by Bandai using licensed characters in place of Crystal Dynamics' jester). *Kaze No Klonoa* certainly adheres to this trend, and Namco's supreme technical understanding can only further its hit-status potential. E



Klonoa's world is the kind of fantastical land enduringly popular with Japanese designers. Some may find the colour scheme a bit over the top



LUCASARTS

Few developers can hold a candle to LucasArts' reputation; now the Californian company is preparing to widen the gap even further

1997 will be a bumper year for 'Star Wars' fans who, following the re-release of the trilogy, can look forward to no less than four new games from LucasArts, across all formats. This scene is an in-game 3Dfx-accelerated shot what from might be the biggest – firstperson shoot 'em up, *Jedi Knight*







The inelegantly titled *Master of Teras Kasi* sees LucasArts seeking to compete with the likes of Namco

California has perhaps more than its fair share of talented developers. Along with Texas, it's the home of many of the software industry's leading lights, including Shiny Entertainment, Interplay, Activision and the company that owns one of the most lucrative licences in the world: LucasArts.

Though its success is firmly grounded in the conservative (and increasingly fickle) PC market, the *Star Wars* publisher has in recent months begun to look further afield, broadening its portfolio to include both the N64 and PlayStation titles. Following the E3 show in Atlanta, **Edge** flew out to San Rafael to take a closer look at the company's trademark PC development and unveil a rather surprising take on the 'Star Wars' game universe.

LucasArts' offices are located just across the Golden

Gate bridge, on the fringes of the appropriately named Lucas Valley. The legendary 'Star Wars' director himself resides just a few minutes' drive away, at Skywalker Ranch – a soundless, peaceful impression of a 19th Century mansion. The white, colonial pillars, sprawling veranda and rocking chairs sit in still harmony with a collection of props and momentos from the 'Indiana Jones' and 'Star Wars' movies – the bullwhip, the fedora and Ben Kenobi's original lightsabre. Though not quite a museum, so rich is this celluloid history that LucasArts could create ten games a year based on the 'Star Wars' universe, and still have room another, unique, take on the subject.

Masters of Teras Kasi is one such take. LucasArts is about to enter hitherto-unexplored territory by producing its first beat 'em up.

The game owes its title to an ancient martial art, 'Teras Kasi', as old as the Jedi themselves. The evil Arden Lyn, allied to the Empire, seeks to wipe out the leaders of the Rebellion during a series of one-on-one Teras Kasi tournaments. Somewhat confused, Luke, Han, Chewie and Leia agree to face Arden Lyn, the bounty hunter, Boba Fett, the Gamorrean Guard, Thok and Hoar (a character not previously encountered in the films) and thus provide the wafer-thin premise for yet another PlayStation fighter.

Considering LucasArts' core talent – producing the world's best graphic adventures – the decision to make *Masters of Teras Kasi* a beat 'em up will appear to some as brave, risky or, for the more cynical, a timely 'Star Wars' cash-in. **Tony Hsieh**, the associate project leader on *Masters*, and looks none too kindly on that opinion. 'Every "Star Wars" game that we make looks at a different part of that universe,' he argues, 'and each is demanded by the public, by the gamers. *Masters of Teras Kasi* is a beat 'em up, and we realise that there are already some good beat 'em ups out there, but we believe this has something unique to offer – the detail of the characters, the way that we draw hand-to-hand combat together with weapon combat and, of course, the special Force powers that may be used in the game...'

Masters' characters are incredibly detailed. Built from as many as 1,300 polygons each and motion-capture animated, they remain faithful to their movie counterparts in almost every detail. Much of the 'Star Wars' authenticity is the result of the variety and complexity of texture mapping, which far exceeds that seen in Namco's *Tekken* titles. The only fly in the ointment for *Masters* seems to be frame rate – at 30Hz, it jars against the smooth flow of *Tekken* and its sequel. Hsieh seems to recognise the problem.







Although *Masters of Teras Kasi* runs at 30Hz, what it lacks in smoothness it more than makes up for in style. Each character model consists of 1,300 polygons, with richly detailed textures

'It's not running as smoothly as *Tekken*, obviously, but the textures are far more detailed, and we have a lot of stuff going on. The characters are far more complex than those in *Tekken* – and they have to be recognisable, too. I mean, there's no movie star to compare Law with, whereas everyone knows in excruciating detail what Luke should look like, what Han's blaster looks like and Princess Leia's unique hairstyle, so we had to cater for that. If it means that *Masters* runs a little less smoothly than *Tekken*, then there you go.' ▶





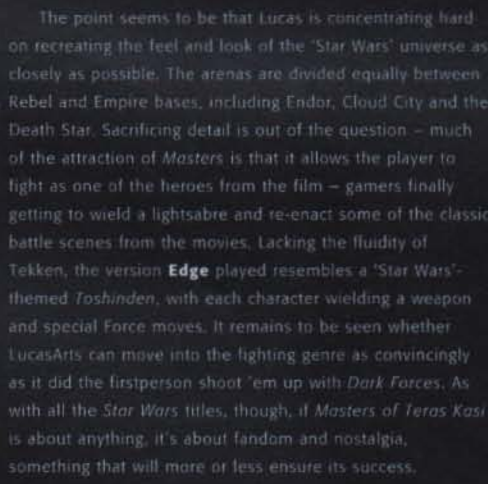
LucasArts mastered the *Doom* genre with its best-selling *Dark Forces*. The sequel, *Jedi Knight*, combines the graphical sophistication of *Quake* with fighting sequences more familiar to fans of PlayStation beat 'em ups



Not all of *The Curse of Monkey Island*'s gameplay is point-and-click. This canon subgame is great fun, providing a welcome change of pace and more than a few gag opportunities



The quality of the in-game animation has to be seen to be believed, easily rivalling the cut scenes of many titles



The point seems to be that Lucas is concentrating hard on recreating the feel and look of the 'Star Wars' universe as closely as possible. The arenas are divided equally between Rebel and Empire bases, including Endor, Cloud City and the Death Star. Sacrificing detail is out of the question – much of the attraction of *Masters* is that it allows the player to fight as one of the heroes from the film – gamers finally getting to wield a lightsabre and re-enact some of the classic battle scenes from the movies. Lacking the fluidity of Tekken, the version **Edge** played resembles a 'Star Wars'-themed *Toshinden*, with each character wielding a weapon and special Force moves. It remains to be seen whether LucasArts can move into the fighting genre as convincingly as it did the firstperson shoot 'em up with *Dark Forces*. As with all the *Star Wars* titles, though, if *Masters of Teras Kasi* is about anything, it's about fandom and nostalgia, something that will more or less ensure its success.

Success is already pretty much guaranteed for *Jedi Knight*, the long-awaited and much-hyped sequel to 1995's *Dark Forces*. The title was originally showcased at last year's E3 in Los Angeles, behind closed doors. Originally powered by Rendition's Verite chip, the final, D3D 3Dfx version is now nearing completion. Since *Dark Forces*, the genre has moved on, with the likes of *Duke Nukem* providing the gameplay benchmark and *Quake* setting the 3D standard. Accordingly, Lucas is digging deep to offer the player something more than just another firstperson shoot 'em up, adding a multiplayer deathmatch facility, a basic level of character interaction, a stronger plot and 'magic' in the form of 'Force powers'. Once again, the player assumes the role of Jedi B-lister Kyle Katarn, who sets out to avenge the death of his father and prevent the Empire from harnessing the power of an ancient Jedi burial ground.

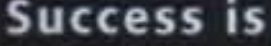
The game's 3D engine is certainly a generational leap beyond *Dark Forces*. There are now three camera options: firstperson, over-the-shoulder and 'chase', while the sprites of the original have been replaced by detailed polygon models. Though the game runs without 3D acceleration, it does include a number of special effects, such as the now-obligatory dynamic light sourcing (yielding some suitably eerie corridors) and destructible transparent windows. The team responsible, lead by producer, **Brett Tosti**, has worked hard to ensure a balance between the multiplayer and singleplayer games. In oneplayer mode, the game is very much a plot-driven affair, with Kyle meeting characters, finding clues to his objectives and completing mini-missions for the Rebels, such as destroying power plants and shield systems, all the while picking up experience points which count towards the accumulation of Force powers.

'The Force powers aren't a gimmick,' Tosti claims. 'They play a pivotal role in both the singleplayer and multiplayer games. In singleplayer mode, your choice of powers will ultimately determine the outcome of the game, as you choose either the dark powers or the light. Obviously, if you repeatedly choose to develop dark powers, your character will move to the dark side, with all that that implies. In multiplayer, the powers allow for dark teams versus light, and for a wider variety of tactics.'

Having confidently moved into the territory of *Quake*, the 'Star Wars' franchise is seeking to conquer the lucrative strategy market, too. LucasArts is simultaneously working on *Star Wars: Supremacy*, an intergalactic wargame. Somewhat surprisingly, the game won't be a *Command & Conquer* clone – instead, *Supremacy* eschews the whistles and bells of that particular genre in favour of a far more hard-nosed *Star Control*-style game more akin to a complex tabletop wargame than anything Westwood might conceive.

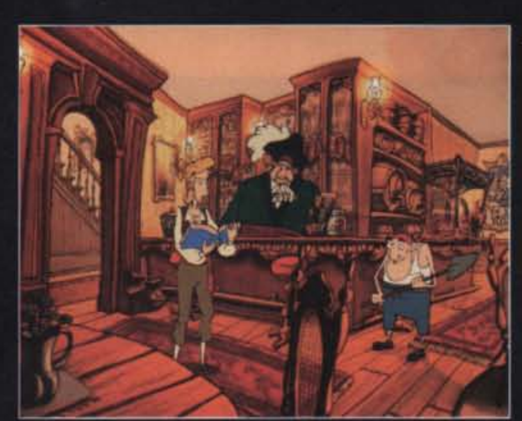
Originally entitled *Rebellion* (possible problems with Rebellion Software prompted a change), *Supremacy* plays very much like a card trading game, with characters such as







No *Star Wars* game would be complete without Luke and co







Fans of the original *Monkey Island* will find much to love in this third instalment. The humour, quality of the art and involving gameplay that made the original such a classic have not been forgotten. Jonathan Ackley, associate project leader, believes it will bring gamers back to the adventure genre

Han Solo, Princess Liea and Luke all acting as modifiers for battles and diplomatic missions. Players can take control of either the Empire or the Rebellion, and all space battles are resolved within a virtual cube, the various vessels placed like counters on a board. Traditionally, such titles usually find themselves relegated to the sidelines, their lack of visual flair proving difficult to sell to a PC userbase currently obsessed with 3D accelerators and the next *Command & Conquer*. No doubt Lucas will be betting that the loyal fanbase it has acquired with *Dark Forces* and *X-Wing* will want to complete their *Star Wars* collections or, at the very least, favour a change of pace.

With all this 'Star Wars' activity dominating the studios, it's easy to forget the games that really made the LucasArts name: point-and-click adventures. Although Sierra is largely credited with the first (*King's Quest*), it was Lucas that made the genre its own with the likes of *Fate of Atlantis* and the legendary *Secret of Monkey Island*. It's been four years since Guybrush Threepwood last cracked wise at the evil pirate, Le Chuck, and a lot's happened to the PC market, and to Lucas, in that time. After the heady success of *Full Throttle*, the company released the sombre and unappealing *The Dig*, which neither sold as well, nor garnered the same critical acclaim as its predecessors. Additionally, other softcos, such as Revolution, began to catch up and even surpass the Lucas standard – *Broken Sword*, with its SVGA cartoon-style graphics and intuitive interface, issued a clear challenge to the Lucas domination, but its relatively poor performance in the high street prompted many to wonder if the genre itself was on the slide.

The Curse of Monkey Island is the third *Monkey* title and is now just a month from completion. It marks a return to form following *The Dig* and will almost certainly set a new standard for the point-and-click adventure when released in November. Despite the recent indifference towards adventures, **Jonathan Ackley**, associate project leader on *Monkey 3*, still believes his game will prosper.

'Computer games trends are cyclical. The example I like to quote is that of the RPG, which everyone thought was a dead genre, which was suddenly revived with *Diablo*. I don't think the fault lies with the genre, I just think that maybe people are burned out on *Myst* clones and the like and they just haven't seen anything new for a while.'

From what **Edge** has seen of the near-complete *Monkey 3*, there's a great deal of innovation on show. The animation is of *Full Throttle* standard, but in SVGA, and the game is huge, with over 80 different locations to explore between two islands, 'Plunder' and 'Blood'. Most of the encounters follow the familiar Lucas path, with branching puzzles and endless wisecracks, but Ackley and the *Monkey* team have added something less predictable, in the form of subgames. At one point, Threepwood gets his hands on a ship's cannon, where the view shifts from third to firstperson to pick off LeChuck's minions as they row for shore – a 'twitch' game in amongst the more usual point-and-click fare.

The Curse of Monkey Island is certainly offering something new in terms of its technology, but what fans of the original will be paying for in November will be something old, not new. They'll be paying for a humorous adventure with real depth; a game where the larger-than-life characters are as familiar as those in a nursery rhyme and where encounters with vicious 'jungle chickens' and the likes of Kenny ('the frog-like lemonade salesman') are considered business as usual.

After a slightly shaky start to the year, LucasArts is on course once again. The company is dealing in nostalgia, in the kind of appealing and somehow still oddly homespun kind of fun that rarely fails to strike a chord with the public – and the competition – alike. E







Guybrush Threepwood's antics rarely fail to raise a chuckle





It may not be the most visually appealing title in the *Star Wars* line-up, but *Supremacy* will doubtless find a niche amongst those fans already tiring of PC *Command & Conquer* clones

I-WAR

THE SPACE-BASED SHOOTOUT HAS BEEN A STAPLE COMPONENT OF GAMERS' DIETS EVER SINCE *ELITE* LOOMED LARGE IN THE EARLY '80S. THEY'VE RARELY LOOKED THIS GOOD, HOWEVER...



It could from 'Babylon 5'. It could almost be 'Star Trek', but for the unfamiliar vessels. The intro sequence to Particle Systems' *I-War* is world-class in every sense. As the sequence rolls, sunlight streams through the clouds of a desert planet, throwing a huge tower into stark relief. Starships drift, islands in a sea of space alive with nebulae, glittering sunbeams and multicoloured light; it's a spectacle that screams 'movie quality'.

Significantly, the Sheffield-based codeshop that produced it is confident that its talents extend far further than masterly use of *Lightwave*. *I-War* (previously entitled *Infinity War*) will step into the path of *Wing Commander V* this Christmas, hoping that its own brand of space shoot 'em up will have enough technical, graphical and, yes, artistic merits to stop Chris Robert's mighty series dead in its tracks. Considering the fact that this is the company's first title, long-time PC gamers may find this aim just a little unrealistic.

'In some ways it is,' concedes **Michael Powell**, Particle Systems' MD. 'The thing you have to remember, though, is what we're interested in is making a better game, and we believe we're doing that. If we get the marketing right, and really push the game, then there's no reason why *I-War* can't be seen as a superior alternative to a series that has, after all, become pretty stale.'









Though they by no means constitute the bulk of the game (above), *I-War* contains some stunning rendered sequences (main), which reveal Particle's expertise

Certainly, with the loss of Roberts from Origin this year (he's created a new company that will publish under the Microsoft banner), the continued success of the *Wing Commander* games is anything but assured. But that's not the point for the dedicated team working all hours to make *I-War* the better game. The Ocean marketing machine behind the game may well be gunning for EA, but Particle is focused on realising its own vision of a space battle simulator that combines the gripping gameplay of LucasArts' *Tie-Fighter* with the depth and detail of a sci-fi movie.

The movie analogy is particularly apt. Though mission-based, *I-War* boasts a strong plot that drives the action, and though not quite a 'virtual battlefield', the plot will be affected by the player's performance in the field. In short, the player is the captain of a Commonwealth Navy vessel, patrolling space, ever ready for a guerilla attack from the Independents, former Commonwealth groups who now demand their independence. This war of attrition has been on the boil for over a hundred years, and appears to be reaching some kind of a climax. Thus, every wrong (or right) move the player makes in a particular mission has a direct effect on the events that take place in the following level. For example, failure to close a supply route will lead to stronger resistance next time around, and so on. This ▶











Particle made the decision early on to avoid the kind of ham acting and poor video quality associated with *I-War*'s closest rival, the *Wing Commander* series. Instead, 'Babylon 5'-style renders illustrate the sci-fi plot

◀ provides a certain amount of open-endedness without compromising the steady build up of the missions.

The cinematic mood is perpetuated further by an innovative menu system which relies not on indecipherable icons but on a detailed 3D model of the bridge of the ship. As the captain of a space-based Navy vessel, the player must interact with the bridge crew and issue commands, as well as engage in the more familiar dog-fights. The bridge appears as a navigable render, complete with pilot, gunner and engineer, each of whom can be individually controlled. For depth, there are the intricate machinations of the engineering section to grapple with, including shield ratios, power output, damage repair and a number of other, more technical problems. As captain, the player can issue orders or become involved at the lowest level. The same, of course, applies to the gunner and the pilot, though most players, the team expects, will play the game as a straight shoot 'em up, and there's likely to be much to admire in that department.

After breathtaking rendered intros, the usual form is to watch helplessly as beautiful streamed visuals are unceremoniously replaced with disappointing in-game graphics. Not so with *I-War*. However, Particle has decided not to embrace the 3D card revolution at this stage. It's not that the team is unimpressed by the latest PC gaming technology, merely that *I-War* can cope just fine without it.

'The cards do add effects, such as filtering, which would look nice, but as it is, our engine is smooth enough, and our texturing of a high enough standard, not to need them,' claims **Rich Aidley**.

After following the progress of PC 3D cards over the past







The game's graphics, though unaccelerated, are fluid, even on a low-end Pentium. A 3Dfx version is not on the cards







Though much of the game involves space combat, *I-War* contains enough detail to immerse the player in the deeper world of tactical displays, navigation and 'Star Trek'-inspired 3D schematics, all of which actually 'work'




Despite utilising Argonaut's much maligned BRender technology, *I-War* is visually impressive

12 months, **Edge** is understandably sceptical about such a claim. Looking at *I-War* in motion, however, it's clear to see that Aidley's boast is not an idle one. Though unoptimised, the 3D engine runs at a smooth 30fps on a hi-end Pentium, and though lacking the texture filtering a 3D card can afford, the spacecraft rarely pixellate, even at extremely close range. For those who remember Argonaut's clumsy beat 'em up FX Fighter it will come as a surprise to know that I-War is driven by the same core technology – BRender.

'BRender has had a lot of bad press, but it's really not that bad,' believes Powell. 'It's a realtime 3D modeller that has allowed us to construct the *I-War* environment quickly, saving us the hassle of writing our own system. We'd be at least six months behind if we hadn't used it. The reason that the game looks nothing like *FX Fighter*, with that awful muddy texturing, is firstly because we have such talented artists, and secondly, because we've only used BRender for the basics. That's what it's good at.'

By 'basics', Powell means the polygon models. The standard practice with BRender thus far has been to create the models and then use *DPaint*, and BRender's own code to map and scale them. The *I-War* team took a different approach. They wrote their own, low-level routines for texturing and used scaled down hi-quality renders as the basis for the texture maps. It may sound piecemeal, but using textures created in super hi-res renders means that they bear the same characteristics as the originals, only on a smaller scale – characteristics such as metallic effects, specular lighting and curved surfaces, all of which are impossible to recreate using a flat tile. The end result is not empty space with fuzzy-looking ships, but a crowded scene full of metallic, gleaming, detailed ships that bear a fair resemblance to those seen gliding out of the intro.



Spacecraft designs score highly for originality. The artists have worked hard to ensure a near-organic appearance

Because of its space setting, the *I-War* engine is free to generate complex models and effects, and not get bogged down with horizons and pop-up. Clouds of polygon-based nebulae give the view colour, specular lighting effects highlight the curves and gleaming metal of the Navy vessels, and dynamic coloured lighting from red moons drenches the space stations. *I-War* is a visual treat, but it's a treat for one.

'For the sequel, we'll be concentrating on network playability,' claims Powell, 'but we wanted to design *I-War* as a single-player experience. All the best games, like *Zelda* and *Mario*, have been singleplayer, and if you try to design for multiplayer it can be sometimes be at the expense of the singleplayer levels. In *I-War*, the player is a lone hero, against the odds, which is how it should be.'

It may not be fashionable, but it's an encouraging sentiment. In fact, with its shunning of the 3D cards, lack of multiplayer support and the more obvious lack of B-list actors, *I-War* may seem like something of a throwback to less cluttered times. But the fact remains that Particle Systems has talent enough to spare, and with its dogged determination to better, but be totally unlike, *I-War*'s peers, it would be a brave man who'd bet against the game making waves when it's eventually released.




What immediately strikes the player is the coloured 'space' which gives the environment a living feel





Such is the quality of the in-game texturing that space stations such as this (above) differ little from their prerendered counterparts



AM3

While AM2 has long been the hottest department within Sega's substantial Japanese development facility, attention has increasingly been turning to its stablemate, AM3. Its jaw-dropping interpretation of 'The Lost World' pushes realtime CGI to the limit

When it first appeared in cinemas around the world, 'Jurassic Park' stunned the movie-going public with what computer technology could bring to the special effects industry. The film's sequel is already out, of course, and while it couldn't have hoped to recreate the impact the original had, it has nevertheless pushed the boundaries of CGI once more.

If further proof of increasingly close relationship between Hollywood and videogames were needed, then Sega's first Model 3 arcade shoot 'em up is it. *The Lost World: Jurassic Park 2* is as representative of a monumental technological leap as Spielberg's first dinosaur movie was. If ever there was a movie-licensed game capable of holding its own against its Hollywood counterpart in terms of visual stimulation and overall excitement, this must be it.

Edge visited the offices of the game's creative team, AM3, which despite the pressures of deadlines (the coin-op was due to be finished in time for the movie's Japanese release), exuded a relaxed atmosphere, in order to chat to two key members behind this amazing new title, as well as checking out the department's other new coin-ops, *Le Mans* and *Top Skater*.



'We started the project using Model 2... We knew the next board would be Model 3, but we didn't know what it could do'

Mie Kumagai, the game's producer, studied Philosophy and worked for numerous companies before joining Sega, working for AM3's Sensory Design Institute which deals with theme park rides. She has since produced *Gun Blade*, *Decathlete* and *Rail Chase 2*, and is married to the main programmer of *The Lost World*.

The project's director, **Shinichi Ogasawara**, has worked with Mie Kumagai on *Rail Chase 2* and *Gun Blade*, and is the man responsible for game aspects such as its story, artistic content, and backgrounds.

Edge: When did you start work on the game?

Mie Kumagai: Discussions began in February 1996. I was working on *Decathlete* and *Gun Blade* and started to think seriously about *The Lost World*. It proved difficult to handle all of these tasks simultaneously. There was competition between some of the AM3 designers and as a result no good ideas emerged from our first meeting. So we decided to proceed in a different way, assigning each member of the team different tasks. Ogasawara-san, for example, was entrusted with the direction side.

Edge: Was Model 3 ready at the time?

MK: No, it wasn't, we started the project on Model 2 and the first presentation we made to Mr Nakayama, our president, was on Model 2. We knew the following board would be a Model 3 board but nobody knew what we would be able to do with it... We were working on the basic research on the board and the game design. It was pretty hard. Also, at that time, Nakayama-san wanted all games to run on Model 3. We could not tell him it was in fact running on Model 2, so work on Model 3 proceeded. ▶

















The designers have made good use of the licence, ensuring players are kept on the edge of their seats as they put an end to the relentless attack of the game's many creatures. Few are as striking as the giant T-Rex (main)

◀ **Edge:** What is your relationship with MCA's Dream Works?

MK: Our president has a good relationship with [Steven] Spielberg. Last February, when we started to consider a new project, the first rumours about Spielberg's 'Jurassic Park' sequel started circulating so our next project was decided very easily. The project was given a green light very quickly and easily. However, rather than just releasing a game based exactly on the movie, Nakayama-san suggested a dinosaur game in complete cooperation with Spielberg. But we preferred to base it on the 'Lost World' story – we felt it worked better in terms of immersing players within the game.

Edge: How much cooperation was there between the two companies?

MK: It was very difficult... After the first presentation in June last was approved by our president, we started to prepare the dinosaur designs. In September, we went to Universal Studios to take a look at the dinosaurs in the 'Jurassic Park' ride. We also took a look at the filming location in Universal Studios, but we couldn't watch any of the filming. However, it proved very useful for us to see the monsters in real size as well as the film's backgrounds and we also interviewed different staff about the film. By the time we got back we had a good idea of the game's atmosphere.

Edge: Is the game's plot like the movie?

MK: No. Both main characters of the movie will appear in the videogame, and within the same time period, but in different situations.

Edge: Have you seen the movie ?

MK: No, not yet. The movie and game were made at the same time. But a certain time was required before we received the information – we didn't get it immediately. As a result, the game's graphics had to be changed several times in order to stick to the movie. That aspect was very hard...

Edge: How did you succeed in recreating the film's atmosphere ?

MK: During our trip to the US, we received different information such as sketches, shots of scenes and different illustrations. Then we created the textures from this material. The designers faced a huge challenge but succeeded in making the videogame not that different from the movie.



'We went to Universal Studios to look at the dinosaurs in the 'Jurassic Park' ride, and we also saw the film locations'

Shinichi Ogasawara: Obviously, the programmers contributed a lot to the atmosphere. From a planning perspective, I think the level of suspense is good.

Edge: How big is the development team ?

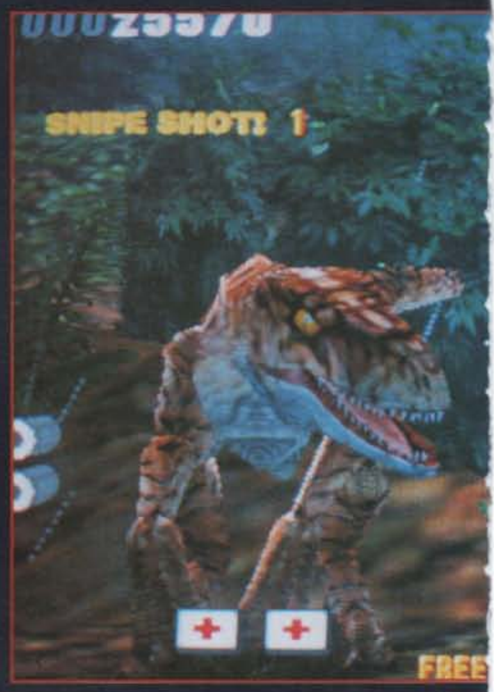
MK: Because this was a Model 3 development, the number has increased throughout the project. We needed some dinosaur designers, background designers and dinosaur motion designers. Each group was made up of a small number, though.

Edge: Where did the staff come from?

MK: Everybody came from within AM3. There is a total of 100 people in AM3 so we had plenty of staff to choose from within the department. Each member has been involved with a different kind of game; we chose the



The game's cabinet light ups at the end of the game for a real cinematic feel





Director Shinichi Ogasawara was responsible for much of the game

staff according to their capabilities. After the project started, we continued to make some changes in the team members. I believe the staff was a crucial aspect in the project development. We needed staff members with a good sense of what the game was about.

Edge: Did you use a standard Model 3 spec?

MK: No, not really – we're using a second-generation Model 3 board... the original Model 3 specifications were not sufficient for us. In the near future, games are going to be released on improved Model 3 boards and when compared with *Jurassic Park 2*, people will argue we could have done more... We have to judge *Jurassic Park 2* on the present Model 3 board.

Edge: The T-Rex is particularly impressive. How many polygons is it made of?

MK: Approximately 3,000 polygons. A Model 2 board can display approximately 5,000 polygons per frame, while Model 3 can display 15,000 polygons per frame. The Model 2 board used different numbers of polygons according to the distance of the object, but such a technique is simply not necessary when using Model 3.



'The T-Rex is around 3,000 polygons. Model 2 can handle around 5,000 polygons per frame; Model 3 manages 15,000'

Edge: Was the 'on-rails' approach chosen in order to achieve the game's level of detail?

MK: We wanted to make more than a simple exploration game, that is why we changed it into a lightgun game. Furthermore, different scenarios will be offered, and to show this movie type of adventure adequately, we needed to lose a certain degree of freedom.

Edge: Was it always going to be a gun game?

MK: Yes, the idea of a shooting game was there from the beginning. During the preproduction phase we thought about different genres – even a racing game. Everybody had lots of ideas but I wanted to make something that reflected the movie. The movie is frightening and focuses on the characters' panic. So, a lightgun game was the genre that best fitted this kind of movie.

Edge: What was the hardest aspect of the game to achieve?

MK: The dinosaur motions were very hard to achieve – it was difficult for us to get them to move 'realistically'. And the setting of the distance between the dinosaurs and the characters was very difficult to get right. Dinosaurs are very big and therefore easy to shoot. For *Virtua Cop* this is not a problem as you can shoot at any time and enemies disappear. But for *Jurassic Park 2* it was very difficult to design the dinosaurs attacking from different places and getting really close before being killed. From the moment they first appear to the moment they're killed there is an important lapse of time. This is in order to keep players interested.

SO: The way of using dinosaurs in the game was very difficult. It was difficult to find a good balance in the way of inflicting damage. This had to be relatively realistic in order to create adequate tension for the player. The tension has to be present until the end.

Edge: As a woman, have you tailored the game to attract women or a wider audience? ▶





Mie Kumagai, the producer, has worked with Ogasawara-san on previous titles







Perhaps predictably, the T-Rex features heavily in the game, and is involved in some gruesomely amusing sequences (left)



◀ **MK:** I don't want to lie… This game was targeted at a wide audience but I did not want to make it universally enjoyable, otherwise I would never have succeeded in making it compact. If I had followed women's tastes, the controls would have been simpler and the game would have a surprise-based scenario. I did not want to make such a simple game… The game was made with Ogasawara-san, and he had a lot of input. He had the idea to include a cooperation rating into the game. If players help each other, at the end of the game the rating will be high and this encourages communication between players during the shooting. I thought it was a good idea, so we included it.

Edge: Was *The Lost World* deemed a special project within Sega or did it have the same resources as most coin-ops?

MK: It's a normal project. Model 3 projects are expensive, and its budget is within that of a normal Model 3 game. However, budgets and staff are increasing progressively.

Edge: Will there be a Saturn conversion?

MK: It would be very difficult – no console hardware could manage it. At E3, different console versions of 'Jurassic Park'-based games were presented but compared with *The Lost World* the differences were obviously big. Graphically, our version is close to the real movie. Furthermore, it would be difficult to recreate the atmosphere of our cabinet in a console game.

Edge: Was the AM4 department responsible for the cabinet design?

MK: Yes. We were shown different designs. At first we were very surprised by the cabinet – we felt it was too big and we couldn't see the point of that. But then we tried it and immediately liked it. We also tried the cabinet with *Bio-Hazard* – that was very frightening.

Edge: How about the game's audio? What about the sound of the dinosaurs?

MK: While in the US, we were given the sound from the movie's dinosaurs. But for our original dinosaur, our sound engineer created



'There were other versions of 'Jurassic Park' at E3, but the difference between them and *The Lost World* was big'

some voices and we also did the BGM. Plus, the cabinet offers 3D surround sound.

Edge: How does the Model 3 board handle sound? What kind of hardware is it using?

MK: The number of channels is improved – we reached four channels. But technically it doesn't differ from the Model 2 board. If we added an MPEG board we would have been able to improve the sound dramatically, but the board isn't ready yet – there's still an amount of development to be done.

Edge: What has been the reaction to the game within Sega?

MK: When we showed the game in this present cabinet, Mr Nakayama and my manager asked me to dismiss its design, but I asked them to try it before criticising. After trying it they changed their minds immediately. I have been ordered by Mr Nakayama to send a finished cabinet to Spielberg. I think they liked it very much.

Edge: Has Spielberg seen the game?

MK: No, not yet. We still have to finish it. He

















In order to progress, players will have to cooperate throughout the game, occasionally even requiring them to free their partner from the jaws of the game's carnivorous beasts (main)

visited us once but we were not working on *The Lost World* then. He saw *Gun Blade* and liked the interactivity. He seemed to be interested in games.

Edge: Were there many things that you weren't able to realise in the game?

MK: Yes, of course. We wanted to do more work on the dinosaur motions and offer more variations. The script became twice the size of the original and Ogasawara-san had to cut many parts. If we'd had more time we would have liked a bigger scenario.

SO: I wanted to make a game like the black-and-white movies I watched when I was a high-school student – things like 'Fights of Golgoth with Nessie'. I wanted to include King Kong, Godzilla or some other monster from old Hollywood movies. I also wanted to feature bigger monsters, but these disappeared and we kept closer to the movie... [laughs].

Edge: Is it true that when a game finishes, the light inside the cabinet illuminates?



'I wanted to make a game like the old black-and-white movies, and include monsters like King Kong and Godzilla...'

MK: Yes, just like if you were watching a real movie at the cinema...

While part of the AM3 department is putting the finishing touches to the ambitious dinosaur-based shoot 'em up, one of its other projects, *Top Skater* (see Arcadeview, **E**45), is also nearing completion. Aimed primarily at the US market, the game nevertheless continues to demonstrate AM3's desire to get the audience to become part of the gaming experience, by offering encouragement and praise to individuals playing the game.

'Currently, within the AM3 department the key word is still "communication",' explains **Kenji Kanno**, of the vast team's planning and direction section.

'Rather than just create arcade machines, we wanted to get players to become immersed within [*Top Skater's*] atmosphere.'

AM3's other main project continues the department's obsession with racing games. *Le Mans 24* is a Model 3 board title inspired by the 24-hour endurance event held yearly in France, in which players will be able to choose one of six real GT-class racing cars from Ferrari, Porsche, McLaren, Mazda, Nissan, and Mercedes.

The game introduces a new free-entry system, meaning the race will continue even when no one is playing, with participants allowed to enter the event at any time. The radar system used is similar to *Daytona's*, and points and extra time bonuses are awarded every time another car is overtaken.

Naturally, night stages will play a major part and players will have to continue racing with only their headlights to guide them.

Four views are available and an extra track will be included for players who successfully complete the standard race.

Although screenshots of the game cannot possibly convey its fluidity and speed, *Le Mans 24* is currently promising to maintain the unparalleled quality associated with Sega's past arcade racers. **E**



















Le Mans 24 is the latest AM3 racing game. Players will be able to enter the race at any time, extending their time limit by overtaking other cars on the track. _Top Skater_ (right) is AM3's other title. Kenji Kanno and Hisao Oguchi (far right) are behind the game's development






The great


escape
The structure of the software industry is changing once again, the world's leading gaming lights leaving established teams and working environments to strike out with new software development houses. Edge examines the trend and talks to the key movers
MICROPROSE
ORIGIN

The videogames industry's gradual transformation from back-bedroom hobby to multimillion-dollar business has often been likened to the evolution of the television and movie industries. Certainly the gradual acquisition of independents by gaming superpowers over the last few years seems to have followed a familiar pattern, the increasingly serious money involved ensuring that a more corporate climate has become the norm. Where once a lone programmer could expect a one-off fee of around £5,000 for a piece of code, advances of £500,000 for a single SKU are now commonplace, making it all but impossible for smaller teams to develop titles independently of a potentially restrictive publishing deal. A bias towards internal development has naturally followed, giving publishers not only total control over their product development, but also saving on expensive advance and royalty deals.

And yet in the last 12 months alone, high-profile *Doom* and *Quake* designer **John Romero** has left his post at id, Sid Meier has opted to leave the security of MicroProse, and *Wing Commander* creator **Chris Roberts** has quit Origin to co-found Digital Anvil. N64 developer Rare has recently lost key staff, and even leading UK development house Bullfrog has been hit by not only the departure of three company veterans but also company founder **Peter Molyneux** himself. It seems the structure of the software industry is far less stable than anyone would once have thought.

Tom Hall, who recently left 3D Realms to co-found Ion Storm with John Romero and ex-Level 7 man **Todd Porter**, sees the rise of a new set of independent developers as a continuation of the movie industry parallel. 'When movie cameras were invented, they were tools of the inventors, the technicians. Once the technology stabilised, then creative people got to take over and see what it could do. There have been similar waves, after the recent digital special effects wave, which we're still sort of in. We've seen the amazing effects in "Jurassic Park" and "Twister", but the characters are rather wooden. Once all the directors get used to this new power, then they can use it effectively and tell a powerful story with it.

'This is what we've gone through in the gaming industry. Now we have a lot of designers saying that they want their vision implemented, instead of being told what they're allowed to do by the people that write the engines. The technology has come of age, and the designers want to see what they can do with it. Designers are in the winter of their discontent, and now want to break free and be in a situation where their design can flourish. For some, it is just a lateral move. For others, it is a tremendously freeing process.'

This certainly appears to be the case with Mucky Foot, a team created as a reaction to the problems that beset previous employer Bullfrog. 'When we started there were about ten people there, now there are about 100,' says **Mike Diskett**. 'It lost a lot of the friendly feeling, then the buyout by EA caused the atmosphere to change in that we're no longer helping to keep this small, friendly company alive. It wasn't as satisfying. Plus, we were finding that as long-term members of Bullfrog we were getting promoted away from the games and spending more and more time in meetings. We wanted to spend all our time creating games.'

Even Bullfrog head Peter Molyneux concedes that something went awry. 'There was this huge bottleneck at the top and we couldn't all be chiefs, there had to be Indians. It meant that there was pressure for Bullfrog to expand, and one of the ways to do that was to be part of an organisation. When Electronic Arts came along and put their offer on the table it was really down to three offers. It seemed the right decision to make and I still believe that for Bullfrog it was the right decision, but I do regret it because Bullfrog definitely changed for me. It changed from a company that was one big family where everybody got on with everyone else, and where lots of people socialised together, to a place that was a lot more political. There was a lot more scrambling to climb up the ladder which meant that people tended to get a little more pissed off, and so for me I found it a very frustrating environment.'

Spending more and more time travelling and in



BULLFROG LIONHEAD

Staff: **Peter Molyneux**
Crowning achievements: ***The Populous* series, *Powermonger*, *Dungeon Keeper***
Leaving: **Bullfrog**
Moving to: **LionHead**



A brief history: Formed Bullfrog in 1987, creating 16bit shoot 'em up *Fusion* the following year. It was the 1989 release of genre-defining *Populous* which really put Bullfrog and Molyneux on the map, a game style which has been explored and refined through a studied, conservative list of subsequent releases. Molyneux's new company includes Games Workshop man Steve Jackson among its number. Titles will be published by Electronic Arts.

Reason for move: Unhappy with role as head of the company, Molyneux intends to continue the hands-on approach he returned to with the development of epochal PC strategy title, *Dungeon Keeper*.

meetings, it was a scathing email from Guy Simmons, now also at Mucky Foot, that turned Molyneux around. 'That single event made me realise I was actually doing something at Bullfrog that I wasn't particularly good at and didn't particularly enjoy. It made me realise that what I should be doing is designing and writing games, and it was at that point that I switched my attentions.

'There were really two choices. The first was for me to say, Okay, I'm a program designer within Bullfrog and nothing else, full stop, or there was the choice of going off and setting up my own group doing exactly what I did with Bullfrog, and that was to attract people, really talented people, and take people that haven't got industry experience, and then grow a group up to a size which feels really comfortable.'

The Mucky Foot crew, meanwhile, are using their experiences at Bullfrog to define their new working environment. 'We're going to try to keep as small as possible,' says Mike Diskett. 'We believe that you can create a world-class triple-A title with a handful of people, rather than 20 or even 40. And we've found that more people always means less programming gets done.'

Diskett is enjoying the opportunity to work without the interruptions and constant meetings that blight so many larger teams, not to mention the politics involved. 'We're going for a democratic company. That's why we don't want to push one person as a figurehead of the company, like at Bullfrog. It did create some bad feeling at Bullfrog.'

He does concede that gamers may see echoes of Bullfrog's style in Mucky Foot's output, but given their involvement in those games it's inevitable that many of the design ideas and ways of working will remain with the team. That Bullfrog pedigree might come with a price, however. It's a real possibility that any publisher which signs up Mucky Foot might put pressure on them to expand. 'We'll just completely and totally refuse,' states Diskett. 'Big wads of cash are always tempting, but we've seen that down that way lies madness. It descends into endless meetings about game design, and when you've 10 or 20 people putting their ideas in, these meetings last a whole day rather than 20 minutes.'

Another potential supergroup to recently emerge in the UK is Eighth Wonder, formed by six ex-Rare employees. Having cut their teeth on acclaimed titles like *Donkey Kong Country*, *Killer Instinct*, and forthcoming N64 titles *GoldenEye* and *Banjo-Kazooie*, it's interesting to note that the company has inked a deal with Sony, choosing to code for the CD-based PlayStation rather than Nintendo's wonder machine. 'We simply wanted more creative control over the games we produced,' says Eighth Wonder's **Oliver Davies**. 'There were other reasons which helped contribute to our decision but ultimately the move was linked to a desire to be able to create the sort of games that we ourselves enjoy playing.'

Davies stresses that their experiences at Rare were mostly positive, but is keen to step out of the shadow of that employer and be recognised as a force in its own right. 'I think that in terms of product, the difference between ourselves and many developers will be reflected in the diversity of our games. Some companies have adopted the philosophy of simply repeating what sold well for them in the past; churning out rehashes and updates of an old formula. And, while that's fine for some people, that's not a route we intend to head down. This industry is really still in its early stages; there's plenty of scope for people to create new trends rather than simply follow old ones.'

While the team's departure from Rare caused genuine shock in the close-knit UK programming community, such shifting of talent is commonplace in the US, where headhunting is rife and more than a couple of years at any one development house is increasingly becoming a rarity amongst programmers, artists and designers. Even the last couple of months

MICROPROSE FIREAXIS



Staff: **Sid Meier**
Crowning achievements: **the *Civilization* series, *Railroad Tycoon***
Leaving: **MicroProse**
Moving to: **Fireaxis**



A brief history: Co-founded Microprose with Bill Stealey on the back of a bet that he could come up with a flight simulator better than one they had both played in an arcade. The following years have seen Meier remain in the development arena, rather than opting for a more corporate role, which makes his decision to leave that much more intriguing.
Reasons for move: Unknown.

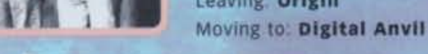
'THIS INDUSTRY IS REALLY STILL IN ITS EARLY STAGES; THERE'S PLENTY OF SCOPE FOR PEOPLE TO CREATE NEW TRENDS RATHER THAN SIMPLY FOLLOW OLD ONES'

Oliver Davies, Eighth Wonder

ORIGIN DIGITAL ANVIL



Staff [from left in photograph]: **Erin & Chris Roberts, Tony Zurovec**
Crowning achievements: ***Wing Commander* series (Chris), *Privateer 2: The Darkening* (Erin), *Crusader* (Zurovek)**
Leaving: **Origin**
Moving to: **Digital Anvil**









A brief history: The Roberts brothers started out writing software for Acorn's seminal BBC Micro in the UK before moving out to Origin in the US and hitting paydirt with *Wing Commander*. Erin returned to this country to produce the *Wing Commander*-esque *Privateer 2: The Darkening*, before joining his brother at the newly formed Anvil, along with *Crusader* creator Tony Zurovec. Digital Anvil have signed up with Microsoft.
Reasons for move: Disillusioned with the structure and working ethics of large teams, and marketing-led project decisions.

have seen Virgin USA high flyer Neil Young defect to Electronic Arts, while a whole band of Looking Glass employees have left to form their own technology-led games company, GameFX. Nevertheless, when both Sid Meier and Chris Roberts announced their departure from MicroProse and Origin, respectively, it was clear that the balance of power was shifting. Meier, who co-founded MicroProse in 1982, always shunned the corporate side of the company in favour of games development, working on hits such as *Railroad Tycoon*, *Civilization*, and *Magic: The Gathering*, and he's become comprehensively aware of the structure shift currently affecting the game-development sector.

'I think the pendulum is swinging back towards the smaller more creative development groups because they have less of a tendency to create the "me-too" products. Three or four years ago publishers were trying to gather up and create their own empires of masses of programmers seeing this as an opportunity to have more control over the product. I think during this time the industry became very stagnant and began doing the same thing over and over again. Smaller independent groups can regain creative control over their products and as I think we've already seen, with products like *Doom* and *Warcraft II*, can really put out breakthrough, innovative games.

There's little doubt that MicroProse will be hard hit by Meier's decision to found Fireaxis and jump into bed with Electronic Arts. The same publisher, of course, that *Wing Commander* creator Chris Roberts has broken away from.

'There are about 35 people here,' says Roberts of Digital Anvil, the development house he's set up with brother Erin, *Crusader* author Tony Zurovec, and filmmaker *Robert Rodriguez*. 'I don't want to have 300 people like we did at Origin – that's detrimental to the whole creative side. Origin definitely lost something when it got bigger. When you don't know half the people in the corridor, that's when you know you've got problems.'

Roberts' departure from Origin is partly a reaction against the policy of putting up to 30 people on a single project, thereby watering down the game's vision, but undoubtedly also a result of marketing pressures. 'One of the problems I faced at EA was that I could get any amount of money for another *Wing Commander*, but not something new,' he admits.

He describes the typical catch-22 situation that so many large publishers have fallen into in recent years, where new and original projects just aren't on the agenda. 'With more money involved these days, a game's development budget ends up being based on expected sales. But unless it's a really familiar title, nobody can predict what it'll sell, and so aren't prepared to throw much money at it. And without

THE ION BREW







Ion Storm's rapid formation and signing to publisher Eidos was indicative of the way a strong track record can make the formation of a new development team a far smoother affair. 'John [Romero, left], Jerry, Tom and I met at John's house and discussed how we should proceed, says Ion Storm's Todd Porter. 'I built the business plan with the help of an investment banker and used my knowledge of the industry and the statistics on successful game development to insure we were in business three years out. Even though the number was greater than any of us guessed, the spreadsheets don't lie so we took them to about five or six publishers.'

Yet some publishers were wary of Ion's desire to fund three projects simultaneously. Others, not surprisingly, just didn't have the funds necessary to sign the superstar team up. The deal they struck is rumoured to be worth some $10m, and protects the developer from loss of revenue based on discounted foreign sales.

'Eidos is an aggressive company, which had a good product out there [*Tomb Raider*] and had the dough to go through with the deal,' says Tom Hall. 'They saw the numbers and immediately sketched out what they could do,' adds Porter. 'We have made it a practice not to talk about specifics, but suffice it to say that the deal was great for both parties...'

proper funding, you can't come up with a strong title. It's a sort of self-fulfilling prophecy.'

Consequently, Digital Anvil has hooked up with the more open-minded Microsoft, with the intention of working on three five-man projects – Roberts' *Freelancer*, Tony Zurovec's *Highway Knight*, and Erin Roberts' *Conquest* (all working titles) – using only staff that have more than five years' experience and at least one hit title under their belt. 'The idea is to have better people with more time to develop a title, rather than just throwing more people at a project,' says Roberts. 'You have to keep the teams small to have a unity of vision.'

Interestingly, Digital Anvil is also making attempts to replicate the creative, driven environment of small external development teams by offering profit-related pay. 'I want it to be a place where you've got a piece of the action, where you feel like you've got ownership,' states Roberts.

'ONE OF THE PROBLEMS I FACED AT EA WAS THAT I COULD GET ANY AMOUNT OF MONEY FOR ANOTHER *WING COMMANDER*, BUT NOT SOMETHING NEW'

Chris Roberts, Digital Anvil

And then there's perhaps the biggest move of all, that of John Romero from id Software to development supergroup Ion Storm. 'I thought about the decision for a year before leaving and started talking to Tom Hall about starting a new company about eight months before I left,' says Romero. 'Leaving after finishing *Quake* was the right choice – leaving after finishing a hit game. I keep on good terms with the id guys and it was pretty easy because we've been friends for years.'

Much has been noted about Romero's frustration at having to design around a game engine that was constantly in flux with *Quake*, and he does admit that working with a finished technology (the *Quake* engine, ironically) at Ion Storm eases the development strain 'by magnitudes'. Yet surprisingly he describes the company structure as being just like that at id, at least in terms of day-to-day development – though adds that 'because of our size we have to run a little more like a real company, have regularly scheduled meetings, and be more sensitive to many other employment issues. Positive-wise, I would have to say that id teaches focus. To do anything really great in life, you definitely must have a focus and stay that way.'

He does, however, believe that the tightly focused way of working at id left no room for any kind of a life outside of work. 'That is a very negative situation when you are an outgoing person, but you can get a lot accomplished if you live at work. It's not for me.'

Ion Storm's **Tom Hall** is more direct. 'I left id for the same reason I left 3D Realms later – the inability to have control of my vision. Id was fine doing what they boiled down to – a hot technology company with strong gameplay and just enough content to make it appealing. 3D Realms is starting to do what I wanted to do – just not in the way I wanted to do it. They're putting a lot of content in their games, but they are going for shock value rather than emotion, which is what I want. They don't really want to innovate whole new untried areas of gameplay – I really do.'

Hall firmly believes in the theory that a single leader will produce better results. 'It may sound high and mighty or self-important, but I'm the only one who has the whole *Anachronox* [his current project at Ion] universe in their head. I can tell an artist instantly if something fits in the universe, why it does, and where it should go. A project will get done faster and be so



BULLFROG MUCKY FOOT

Staff (from left): **Fin McGechie, Mike Diskett, Guy Simmons**
Crowning achievements: **Mike Diskett: *Syndicate*, *Theme Park*, *Syndicate Wars*; Guy Simmons: *Theme Park*, *Creation* (uncompleted); Fin McGechie: art for *Populous 2*, *Gene Wars* and *Syndicate Wars*, art and design for *Theme Park* and *Indestructibles* (the latter now on hold)**
Leaving: **Bullfrog**
Moving to: **Mucky Foot**



A brief history: Three of the longer-serving members at Bullfrog, they pre-empted Molyneux's decision to jump ship by several months. Working on a PlayStation title (followed by a PC conversion) due for completion mid-'8. Yet to sign to a publisher.
Reasons for move: The trio grew disillusioned with the changing structure of Bullfrog, and yearned for a smaller, more efficient and controllable working environment. The decision to shelve Simmons' *Creation* project also certainly contributed to the decision to leave.

much more distinctive if there is one person guiding it.'

Of course, one other reason to leave a large company is born simply from the way the whole company is run. Ion Storm's Todd Porter: 'Personally, Jerry [also now at Ion] and I left 7th Level because the people making decisions had no idea how to make great games. Believe it or not, I had to deal with things like bailing one of my programmers out of jail because the management insisted they be on my team. God knows how much time was lost because of bad decisions. With *Dominion*, I saw a trend and jumped on it, but when you have to spend four months convincing management that a game like *Dominion* is worth doing, the moment is lost.'

Porter perhaps sums up the appeal of the setting up a new, more streamlined development team when he says, 'At Ion, I am management.'

Speaking to these job-swapping industry figures, it's clear that the inability of employers to retain a fresh, creativity led attitude is the prime reason for these departures. It's a cliché, certainly, but the idea that smaller developers and publishers are more willing to take risks than larger corporations does seem to be true. Ironic, given that it's the better-funded publishers that ought to be able to be more daring. Eighth Wonder's Oliver Davies agrees. 'Large companies generally make their decisions about which type of game to develop based upon their expectations of sales for such a game. Thus, a company may churn out derivative platform games because past sales figures suggest that people want to buy exactly that. If a game is fun then, provided it is marketed correctly, it should sell. I think many small developers probably see things in much the same way; sales should be a reflection of the game rather than vice versa.'

'IT'S ABOUT HAVING A SMALL GROUP OF PEOPLE GOING TO THE PUB BRAINSTORMING TOGETHER RATHER THAN SITTING IN A BOARDROOM ALL DAY ARGUING'

'If you look at the companies that proliferate this industry you'll see a great number of owners that have forgotten or never knew what it is to make a fun game,' says Ion Storm's Todd Porter. 'They are all looking at formulas, as if this can somehow be a crystal ball to the future. They see *Myst*, *Warcraft*, *Diablo* or *Quake* and they think, Hey, if we do games like that then we too will be profitable.'

Little wonder that independents such as David Braben's Frontier Developments are considering funding projects themselves until near completion, and only then looking for a publisher willing to bring the game to market. While such a working method should guarantee more originality, and purer (ie less influenced by marketing men) software, it's beyond the means of most development teams. Instead, the many new developers must struggle to find a publisher willing to brave the risks and costs associated with external development.

Oliver Davies again: 'I think that the industry is as equally able to support external development teams as it has been consistently able to support the larger developers. If the market expands then we'll see more and more external development teams, but, should the market contract, then small external development teams will probably feel the bite first. I think that what an external development team can offer over an internal team is heavily dependent upon the team in question.'

As for the recent proliferation of new development houses, Davies sees it as part of a cycle, but also believes that there's a cumulative effect here. 'People see that it can be done and decide to have a go themselves which, in turn, inspires other people to make the leap.'

So is this really the birth of a brave new era? 'I hope so,' says Chris Roberts. 'I said four or five years ago

RARE EIGHTH WONDER



Staff (from left): **Steve Patrick, Oliver Norton, Jeff Stafford, Adrian Smith, Oliver Davies, Christopher Gage**
Crowning achievements: ***Donkey Kong Country 1 & 2, Killer Instinct***
Leaving: **Rare**
Moving to: **Eighth Wonder**



A brief history: The three engineers, two artists and one game designer worked at high-quality Nintendo developer Rare, where they contributed to the acclaimed SNES hit *Donkey Kong Country*, both *Killer Instinct* games, and forthcoming N64 titles *GoldenEye* and *Banjo-Kazooie*. A deal with Sony has been struck to work on PlayStation software.
Reasons for move: The restrictions of working on a cartridge-based format and the urge to step out of Rare's shadow. A desire to move away from formulaic sequels and concepts is also likely.

that the studio model was going to go away, and I think eventually it'll happen.'

John Romero has a different view. 'The recent period of conglomeration in the industry has disillusioned some of the designers at the companies who were acquired. This leads to fragmentation and is a natural part of the overall cycle. The same thing will happen again, but not for a few years.'

There does, however, seem to be a general consensus concerning the best environment for creating videogames. With even Chris Roberts, one of the highest-profile leaders of large teams, getting back to basics, the five-man team looks like becoming the norm again. 'You can turn a motorcycle around easier than a plane,' says Tom Hall with smile. 'You can have lots of artists, but the design team must be small to keep things under control, or the project will slow down under its own weight and bureaucracy.'

'It's about having a small group of people going down the pub brainstorming together rather than sitting in a corporate boardroom all day arguing,' believes Mucky Foot's Mike Diskett. And it's hard to argue with the logic that the vision of a select, experienced few – or even a single talented designer – will produce more individual and experimental results. Game design by committee just doesn't work, as the end result will always be a weak compromise, a lacklustre middle ground that doesn't satisfy any faction. 'Many companies are caught up in group decision making,' says Todd Porter. 'It's a way of buffering the blame for a bad idea.'

While Oliver Davies is probably right with his argument that the industry is easily able to support external development teams with their more efficient, and therefore less expensive, development budgets, there is the danger that the rate at which new teams are appearing will simply saturate the market.

Peter Molyneux is cautious about the aftereffects of the current climate. 'I do start to wonder where all these games are going to go and who's going to publish them. Because I know of 20 new start-up development groups, all of which have the same ideas, all of which are saying exactly what I'm saying – which is that we're going to produce the best games, the most original games, the best technical games – and you just think, well, there were only a handful of successful games last year, for all these new groups to develop those it's going to be tough.'

What this is likely to mean is that the countless small teams on both sides of the Atlantic will feel the squeeze most, as the new breed of high-profile independents bag the best deals and take the lion's share of publishers' external development budgets. The lesser-known teams will have to gain a strong reputation pretty fast, as newcomer VIS Interactive (currently working on *Earthworm Jim 3D* for Interplay – see **E**47) has done, or face a future handling conversion work in a bid to stay afloat.

THE DIGITAL DESPERADO

In addition to Chris Roberts, brother Erin and fellow ex-Origin man Tony Zurovec, Digital Anvil also boasts filmmaker Robert Rodriguez among its number. The director of 'Desperado' and 'From Dusk Till Dawn' may seem an unlikely candidate for involvement in a development outfit, but he's actually known Chris Roberts for around five years. 'Some of the stuff I do has a film component, so I thought it wouldn't be a bad idea to have him on board as a company consultant – to have someone who has more experience on that side than us,' explains Chris Roberts.

'The idea is that we're trying to develop a game, and make a movie of the game which he'll write and direct. We're focusing on creating cool universes and properties. We want to exploit games first and foremost, but also comic books and movies.'

Two of the three titles under development will also feature movie footage, though with the guidance of Rodriguez and more experience on Roberts' part, the results will be more ambitious than the sequences used in the last two *Wing Commander* games. 'They won't be anywhere near as linear,' confirms Chris.

Freelancer is the working title of his project, a game that'll feature multiplayer gaming similar to the Battlenet system at the heart of *Diablo*. 'It's a big 3D space epic, something really different,' he laughs. 'It'll be more in the *Privateer/Elite* model, where you trade, work as a mercenary, and build your ship up. It's also built to work over the Internet, so you can turn up anywhere in the universe and fight with other pilots who may be human or computer-controlled.' Set to feature a radically different style of control interface, *Freelancer* is currently in the early stages of a two-and-a-half year development schedule.

Reviving the *Car Wars* genre, Digital Anvil's *Highway Knight* (another working title), is Crusader creator Tony Zurovec's baby. 'It's set 50 years in the future, where America has devolved and given rise to auto mercenaries,' reveals Chris. A journey from the East coast to the West, complete with the remnants of familiar landmarks, is promised by the team.

It's Erin Roberts' *Conquest* (again, a working name only) that'll provide Digital Anvil with its debut title. True 3D and a science-fiction scenario again figure, but with the player in control of a whole fleet rather than a single craft. Strong strategy elements will also figure in this unusual hybrid. 'The pitch is that it'll look something like the end battle of "Return Of The Jedi",' enthuses Chris.

Edge awaits a first glimpse of Digital Anvil's work with keen interest.

From a publisher's point of view the likes of Ion Storm, Lionhead, Mucky Foot and Eighth Wonder come with track records to die for, making it easier for them to bring more daring and non-market-led titles to gamers. All the teams featured here understand the need to balance strong leadership with team input; realise that bigger games don't necessarily require hordes of programmers artists and designers; and have the experience necessary to create truly creative games while still appeasing the ever-conservative marketing departments.

But even for the teams boasting that magical combination of industry muscle and hard-gained knowledge, there's the ever-present danger that money, expansion and publisher pressure could see them become what they sought to get away from. In which case, John Romero's prediction that the cycle will continue to repeat will be proved right. At which point, **Edge** will be there once again to examine the rise of the new breed.

GoldenEye





Later levels see the introduction of heavier artillery such as grenade launchers (top). However, these are no match for the Soviet tank (above)



Film licences have traditionally been rather disappointing affairs, so much so that the term itself is now often used as a euphemism for poor-quality software. External pressures such as the desire to set the release date in order that it coincides with the hype surrounding the film's own release has resulted in substandard software appearing on the shelves, the publishers responsible well aware that the name alone will sell enough copies to bring in more money than was spent developing it.

Given that Rare's *GoldenEye* is appearing almost a year and a half after the release of the movie which provided its inspiration, it can hardly be considered a conventional example of the genre. However, cynics will no doubt argue that Nintendo's hope is that the game will ride on the publicity wave accompanying Bond's forthcoming adventure, 'Tomorrow Never Dies'. True, the timing is unlikely to give Nintendo sleepless nights, but the brutal reality is that quality software takes time to produce, and *GoldenEye* is just as much a slave to that harsh fact as any other release.

Plugging the cart in immediately dispels any fear that the title will follow in the steps of previous film adaptations. After the mock-up BBFC certification (which gives the game a '4' certificate for fourplayer action) and the rotating stainless steel Nintendo logo, the instantly recognisable Bond theme issues forth as the opening credits introduce the cast, and somehow it is clear that this is going to be something special.

GoldenEye's 18 missions follow the plot of the film closely, with a certain amount of artistic licence employed in certain sections to ensure that this firstperson shoot 'em up contains even more action than its filmic counterpart. As a result, the game's scenarios are as diverse as could be expected from any Bond adventure, seeing 007 bungee-jumping from a Russian dam, defusing bombs in Monte Carlo, infiltrating enemy installations, stealing secret weapons form Siberian army bases, disabling enemy satellite communication in Cuba, meeting up with old adversaries and, of course, saving the girl.

For each mission, a number of objectives have to be successfully completed in order to progress (the exact number depending on the difficulty setting). To get out of each typically secret-agent-like jam, the intrepid hero can make use of one of the many different weapons at his disposal, as well as timeless 007 gadgets such as his watch laser or magnet.

However, before jumping straight into action, it's worth noting the astounding array of options available. Almost every aspect of the game is adjustable – normal or widescreen aspect ratios can be selected, and numerous control configurations applied, including a *Turok*-like setting (handy for those familiar with Acclaim's title) and a dual analogue control which requires players to hold a joypad in each hand – one controlling Bond's movements, the other in charge of aiming duties. Though this isn't the most intuitive option available, it's worth persevering with as it offers certain advantages over the single-controller system.

At the beginning of a level, the player starts off with Bond's trusty Walther PPK, but shooting soldiers and collecting their weapons soon provides access to more powerful artillery, such as machine guns, grenade launchers, mines, and shotguns. Furthermore – and unusually for this type of game – Rare has included a couple of features which would not be expected from a movie licence, one of which is the ability to hold a gun in each hand – an essential survival technique in some of the later levels. Running down one of the corridors in the Siberian computer base with two Russian Klobb sub-machine guns spraying enemy guards with bullets is one of the game's many supremely satisfying moments.





One of the game's most impressive and original features is the ability to zoom in on targets when sniping





The 18 standard levels offer a diversity of scenery, from snowbound sections (left) to more conventional scenes (right). Such variation within the limitations of a 96Mbit cartridge is ample testament to Rare's design skills





The multiplayer option may lack the oneplayer game's graphical detail, but playability remains fantastic

The game's other novel twist is the ability to zoom in on potential targets when using the sniper rifle (one of the first weapons available), which allows the player to neutralise opponents quietly and efficiently from hundreds of metres away. This feature is particularly impressive when it is used to take out the soldiers patrolling the guard towers on the dam at the end of the first mission, their utter helplessness underlining the beauty of such a form of attack.

However, what stands out most about *GoldenEye* is the depth of its atmosphere. The realistic setting, remarkably well-animated characters and interactive backgrounds combine to create a genuine sense of 'being there' which is rarely experienced in a videogame. Bullet holes pepper walls after frantic battle scenes, lights can be shot out, shrapnel breaks nearby windows, smoke lingers momentarily after explosions, hats can be shot off enemies' heads, and characters react differently depending on where they're hit – shoot them in the head, for example, and they go down immediately, but more sadistic players can inflict harm on limbs several times before the injuries prove fatal.

In addition, enemy soldiers are particularly intelligent, moving swiftly into any area where they sense gunfire action is afoot. Stealth is therefore advisable in order to keep a low profile, which means that security cameras should be destroyed before they set off an alarm, something usually closely followed by an entire platoon of guards intent on putting a stop to Bond's antics.

The soldiers also react differently – some roll along the ground while continuing to shoot; others crouch or come running towards their target. **Edge** was particularly intrigued by the actions of one guard who suddenly decided to stop firing. It was only when it transpired that he was getting ready to throw a grenade that a panic-stricken attempt to get far enough away from the deadly object ensued.

ENEMY SOLDIERS REACT DIFFERENTLY – **SOME ROLL ALONG** THE GROUND WHILE **CONTINUING TO SHOOT**; OTHERS CROUCH OR COME **RUNNING TOWARDS THEIR TARGET**

Even on the easy 'Agent' setting, the game's many ▶



All of the enemy soldiers are realistically texture mapped and motion captured and react differently depending on where they're shot and the weapon used to terminate their existence







The scenery is totally interactive – just about anything that could be shot in real life can be shot here



GoldenEye's scenery is extremely complex as well as being realistically detailed, giving players the sense of truly existing within this world. Even the intro sequences which precede each mission happen in realtime

◄ stages should keep most players occupied for a substantial amount of time, and completing the game in the hardest difficulty level reveals two extra scenarios. Further bonuses include extra weapons such as a Magnum, which can shoot through doors and – if the player can successfully line them up – will go through four soldiers before it runs out of steam.

As if all of this wasn't enough, Rare has included a hugely addictive multiplayer option to tempt two, three or four players away from the main game. There are five scenarios here, ranging from a straightforward deathmatch to scenes inspired by films such as 'You Only Live Twice', where players have only two lives; 'The Man With the Golden Gun', in which one hit from eponymous weapon proves instantly fatal' and 'The Living Daylights', essentially a flag tag game.

After choosing a game type, players have to select a character from an impressive list featuring not only all of the individuals featured in 'GoldenEye' but some infamous Bond adversaries such as Jaws and Oddjob. Players can also form teams so that two players take on the other two, or individuals in a confident mood can take on three players singlehandedly.

Further reinforcing Rare's reputation as the strongest independent N64 developer, *GoldenEye* slips the player into James Bond's hand-stitched leather shoes but fortunately discards with the tedium of those seemingly interminable MI6 lectures. It's a game sure to leave players shaken and most definitely stirred. E

Edge rating:

Nine out of ten





Bond's watch doubles as the option screen (top) and as a useful gadget





The variety offered by the 18 missions sees prospective secret agents undertaking missions set in underground Russian missile bases (left) and Siberia, neutralising satellite links (right), realised with extraordinary graphics

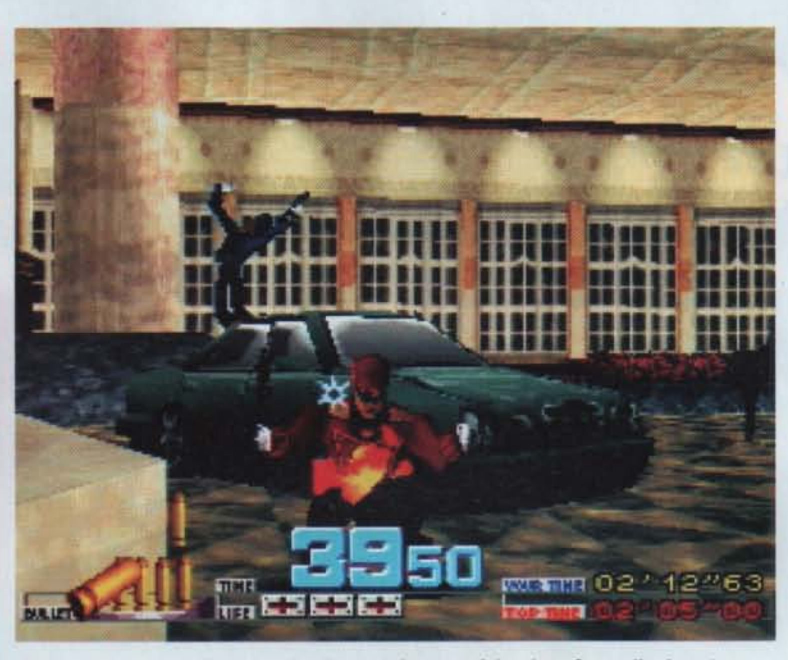
Format: **Nintendo 64**	Publisher: **Nintendo**	
Developer: **Rare**	Price: **TBA**	Release: **July (Jap)/August (US)**

Time Crisis

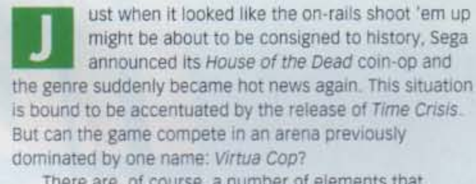








Namco's spot-on arcade conversion is an exuberent celebration of on-rails shoot 'em up mayhem. Predictably, the screen is constantly awash with bullet-fodder baddies



Just when it looked like the on-rails shoot 'em up might be about to be consigned to history, Sega announced its *House of the Dead* coin-op and the genre suddenly became hot news again. This situation is bound to be accentuated by the release of *Time Crisis*. But can the game compete in an arena previously dominated by one name: *Virtua Cop*?

There are, of course, a number of elements that differentiate *Time Crisis* from the seminal AM2 series. Most obviously, here the player can take cover behind various objects and so is not constantly in the line of fire. In fact, the only way to get out of cover is to keep the red action button near the end of the gun barrel pressed down, which means the player is always in the thick of things but rests and reloads in a safe position. This can be reversed in the option screen so the button has to be pressed in order to take cover.

This system is definitely preferable and more realistic to the one used in *Virtua Cop*, in that it allows the player brief respites during which he can pause to consider the carnage without escaping the action for too long (each section has to be completed within a very strict time limit). It also means that the gun can be trained at a point on the screen while reloading takes place (as opposed to the *Virtua Cop* approach where you had to shoot below the screen to reload), thus cutting down on the microseconds of disorientation that occur when attention is taken away from the screen.

Unfortunately, though, some of the intricacies that AM2 introduced to the genre are lost here. There are no guileless civilians running about the place trying to get shot, which removes an entire level of skill and coordination from the proceedings – as does the lack of such nuances as 'mercy shots' and 'legal shots'. In *Time Crisis*, then, pin-point accuracy and target identification are not quite as important as sheer, instinctive speed.

Aside from these subtle yet fundamental differences, *Time Crisis* is pretty much gun-game business as usual. Enemies fly out from doorways, from behind barrels, from parked cars, from under counters, and the player plugs away at them, taking care to exterminate the ones carrying rocket launchers and grenades first. Behind it all there's a familiar plot (in this case, girl gets kidnapped by criminal syndicate, boy infiltrates criminal syndicate, boy gets girl), and there are even a few great end-of-level bosses for good measure.

That's not to say that *Time Crisis* is mundane – far from it. It's like a Hollywood action blockbuster – you know exactly what to expect and the experience is likely





Enemy troops often take cover behind metal shields, making it more difficult to shoot them



The levels all work well as large 3D environments, despite the on-rails nature of lightgun gameplay



Visual diversity is one of the game's key strengths. Towers, arcades and penthouse suites all crop up



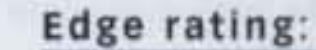
Attack can come from above or below, heightening the 3D feel

to be about as deep as a Spice Girls lyric, but it works anyway. Nothing quite compares with the visceral thrill of accurately taking out enemies one by one as they charge, roll and jump across the screen – especially as their bodies twitch, shudder and spin with every bullet that hits them. The sense of excitement is heightened by the range of baddies, as well as the arsenal of weapons they have at their disposal – machine guns, knives, grenades and claws all come into play, forcing the player to keep a sharp eye on every inch of the screen in order to spot the most deadly attack before it happens. The result is an exhilarating celebration of raw, videogame action.

In terms of visuals, as well as gameplay, this is a first-class conversion. There are two standard stages (each made up of several areas). The first is a straight port of the arcade experience, but the second presents an entirely new hotel complex for PlayStation owners to bulldoze through. Each stage is chock-full of detail, and every possible combat set-piece is explored – in just one room, enemies burst out from behind paintings, abseil from the roof and then lurk in the darkness of an interconnecting chamber, lit up only by the flash of gunfire. Elsewhere, the on-screen character dives through an air vent into a warehouse full of ninjas, battles it out up staircases and through corridors, crashes over walls into gardens full of machine gun-toting crooks, ducks behind a grand piano in the hotel ballroom, and gets embroiled in dozens of other outlandish situations. Interestingly, the locations make full use of depth and perspective – baddies often appear on warehouse floors way below the player or on overhead walkways in the far distance – so there is always a sense that three dimensions are involved, despite the simple point-and-shoot gameplay.

And, of course, there are a number of places where the quality of the player's performance dictates where the on-screen character heads next, providing the motivation to try again even if the arcade version has previously been attempted or the PlayStation version completed.

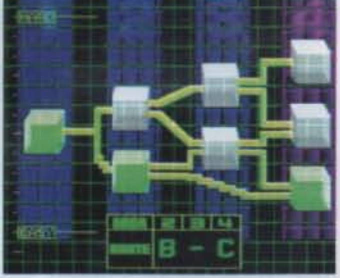
Essentially, *Time Crisis* is a videogame symphony of destruction, building crescendos of violence onto each action-packed scenario. Each time you think you've seen the most breathtaking set-piece, another tops it for sheer gun-toting thrills. Despite its simplicity and lack of depth, this game – especially if played in front of a huge TV screen with surround sound – is at least equal to AM2's efforts. A definitive arcade experience.



Edge rating:

Eight out of ten





The player's route through the Hotel (above) is governed by his skill with the excellent Guncon (top)









A shoot 'em up wouldn't be complete without bosses, and *Time Crisis* has plenty, including (from left) claw-toting ninjas, a knife-throwing ginger-haired henchman, an insect-like armoured car and a character named 'Web Spinner', who could easily be mistaken for Keith out of The Prodigy in a gas mask

Format: **PlayStation**	Publisher: **Namco**	
Developer: **In-house**	Price: **¥7,800 (£45)**	Release: **Out now (Japan)**

X-COM: Apocalypse



As with the previous *X-COM* games, *Apocalypse* is split into two sections. Above is the Cityscape, where players decide their strategies. In the tactical mission section (left), agents fight the aliens at close-quarters



Before each tactical mission agents can be split into squads, which can then be controlled as a single unit

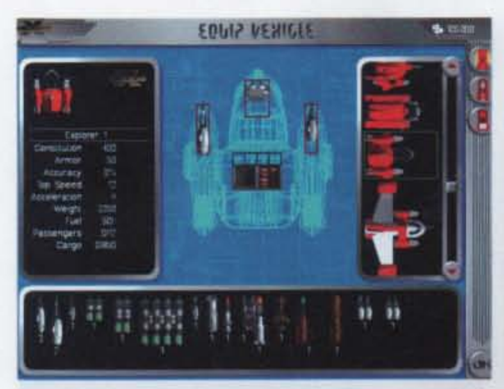
MicroProse's *UFO: Enemy Unknown* (released as *X-COM: Enemy Unknown* in the US) was one of those games that pops up, seemingly out of nowhere, and almost overnight becomes a classic. Set at the turn of the century during a wave of UFO sightings, its plot centred on a top-secret multinational organisation called 'X-COM'. As the overall commander of this group, it was your job to investigate the UFOs and protect the Earth from any threat they posed.

Although it could hardly be described as visually stunning, *Enemy Unknown* was a triumph of gameplay over gloss, skilfully combining strategy and tactical combat into a seamless, remarkably addictive whole, and it quickly became a huge seller.

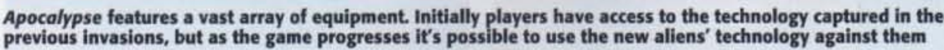
Of course, few successful games go without a sequel, and *Enemy Unknown* was no exception. The result was *X-COM: Terror From The Deep*, which advanced the story by 40 years, to a time when another alien menace faced the Earth. Although appreciated by many aficionados of the original game, *Terror From The Deep* suffered from the fact that it was based on exactly the same game engine as *Enemy Unknown*. It was also very, very tough to complete, which hardly helped matters.

Now MicroProse and Mythos Games have returned with a third instalment of the *X-COM* saga, featuring a completely new game engine and yet another alien threat. The result is one of the best strategy games ever seen on the PC.

X-COM: Apocalypse is set another four decades or so on from *Terror From The Deep*, in the year 2084. The Earth's environment, already reeling from the damage inflicted on it throughout the 20th century, has all but collapsed in the wake of the second alien invasion, leaving much of the planet uninhabitable. However,







***Apocalypse* features a vast array of equipment. Initially players have access to the technology captured in the previous invasions, but as the game progresses it's possible to use the new aliens' technology against them**




Like its predecessor, *Apocalypse*'s online UFOpedia contains details of equipment and weapons available

technology has made huge leaps forward as a result of the two alien wars, allowing humanity to colonise the stars. A lone outpost is left on Earth in the form of a vast city called Mega-Primus.

As the game begins, though, inexplicable dimensional rifts have started to appear in the Mega-Primus megalopolis, through which strange new UFOs are appearing. The city government has increased funding to X-COM, and once again it's up to the player, as the organisation's commander, to discover exactly what these new aliens' intentions are and thwart them.

Like the previous *X-COM* games, *Apocalypse* is in fact two games in one, interlinked so that success in one is transferred to the other. The first is the Cityscape, which forms the strategic backbone of the game. Here the player builds and develop X-COM, hiring new staff, training agents and equipping vehicles, constructing and expanding X-COM's bases around the city, researching and manufacturing new technology, and attempting to protect the city from UFO incursions.

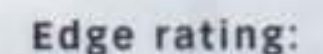
When the player shoots down a UFO, uncovers alien infiltrators or is alerted to the presence of aliens somewhere in the city, agents can be sent in, at which point the action switches to the second game, a tactical combat simulation in which troops are controlled in their efforts to kill or capture the invaders. Success allows the recovery of aliens (dead or alive), together with their weapons and equipment. Then, when the player returns to the Cityscape, scientists can be put to work researching them and their technology. Through this process the player gradually comes to learn more about the aliens, which in turn leads to the discovery of a means to stop them and makes it possible to start turning their advanced technology against them.

X-COM: Apocalypse is effectively a blueprint for creating a great follow-up to a successful game. First, the designers have clearly identified the key elements that gave the original title and its first sequel their huge appeal. On top of this basic framework they have constructed a new game engine from the ground up, which has allowed them to expand almost every aspect of the game and incorporate dozens of new ideas.

Perhaps the single biggest change lies in the tactical combat sections, which can now be played in either a turn-based mode, similar to the original games, or in realtime. It would not be an overstatement to say that this new realtime system is one of the best tactical combat games ever designed, offering all the advantages of realtime over turn-based systems without sacrificing any tactical detail.

But this is far from the only addition to the game. There's not a single aspect of the original that hasn't been expanded, tweaked, and added to in numerous ways. Combine this with the new realtime system, the incredible depth and scope of the gameplay, a whole range of new ideas and the same core appeal as the previous titles, and the result is a strategic masterpiece.

X-COM: Apocalypse is an absolutely essential purchase for anyone who played and enjoyed either of the previous games. Equally importantly, it is just as highly recommended for newcomers to the series. A landmark strategy title, then.



Edge rating:

Nine out of ten



Although initially the aliens are relatively cautious, their onslaughts become more vicious and deadly as the game progresses. Keeping pace with their changing strategies is absolutely crucial

Format: **PC**	Publisher: **MicroProse**	
Developer: **Mythos Games**	Price: **£45**	Release: **August**

Yuke Yuke Trouble Makers





The crux of gameplay requires players to grab all manner of objects, including the head of this bizarre giant block robot (above). The N64 gets a more thorough workout elsewhere (top right)

There is a definite retro feel to this game which initially sits uneasily with its status as a dedicated N64 title. While obviously the predominantly 2D graphics are a reminder of a bygone age, it's the totally surreal gameplay, weird characters and inane muzak that truly takes the player back to the likes classic 16bit titles such as *Geomon* and *Yoshi's Island*. This is platform action as it used to be, with timed-to-perfection jumps, collectable power-ups and bosses whose weak points require patience to expose. With these elements come demands for old skills such as pin-point accuracy and resilience in the face of seemingly unjumpable jumps and unbeatable end-of-level bosses.

Treasure has hardly ignored the N64's abilities, either. The controls, for example, make use of just about every button on the 'pad, with elaborate grab, jump and multi-directional boost actions all needing to be mastered if progress is to be made. There are also numerous 3D background and boss effects to remind the player that 64bit technology is being put to work here.

Regardless of this, what the game lacks in sheer polygon-pushing it makes up for in imagination. What initially seems like limited gameplay soon opens out into an engrossing experience as the Treasure team explores countless original variations on the platform game theme. In fact, almost every stage offers a new challenge to the player, and many require both manual dexterity and puzzle-solving skills.

Yuke Yuke Trouble Makers may not go down in history as a classic N64 game – it wouldn't look out of place on the Saturn, for example, minus some of its more extravagant graphical fancies – but it goes a great distance in proving that a heavy polygon count does not necessarily make for an enjoyable game. Certainly, as an infuriating reminder of how gameplay used to be before complex 3D polygon worlds became compulsory (whatever the cost to gameplay), look no further.

Edge rating:

Eight out of ten









The sheer variety of gameplay twists is bewildering. The game is due to hit the west under the moniker of *Mischief Makers*, although heaven knows how its unique Japanese individuality will be received

Format: **Nintendo 64**	Publisher: **Enix**	
Developer: **Treasure**	Price: **¥7,800 (£45)**	Release: **Out now (Japan)**

Atlantis



There's not a great deal of combat in *Atlantis* – the gameplay is more concerned with talking to people, finding clues, and so on – but when fights *do* occur, the graphics are just as impressive as in the remainder of the game



The graphics system works very well, creating excellent atmosphere

Unfortunately, while visually glorious, Cryo's previous graphical adventure efforts (*Dragon Lore* and its sequel, and *Lost Eden*) all fell down rather disappointingly on the gameplay front. Despite this, apart from a couple of stabs at the racing game genre with *Megarace 1* and *2*, Cryo has stuck with the adventure format through thick and thin, and its latest title, *Atlantis*, is no exception.

The game is set in the heyday of the mythical land of the title, and casts the player as Seth, a new member of the Queen's Companions, an elite group dedicated to serving and protecting the queen of the island.

As with all of Cryo's adventure games, *Atlantis*'s graphics are immediately striking. This time, though, the designers have outdone themselves. The rendered intro sequence that depicts the player's arrival at the Royal Palace flows seamlessly into the rendered 3D environment of the game itself, and, unlike the confines of *Myst*, when standing still in an *Atlantis* location the player can move the mouse around to pan over the territory, adding a level of believability to the proceedings.

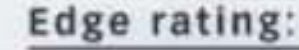
When a gold arrow appears in the centre of the screen, the player can click to move in that direction, cueing another excellent rendered sequence which ushers in the next location.

Fortunately, all this visual splendour is backed up by a pleasantly simple interface that takes seconds to pick up, and an interesting plot involving the disappearance of the queen and the player's efforts to discover her fate. The result is what Cryo must have yearned to achieve for a long while – a playable, atmospheric, and fairly engaging adventure game with a state-of-the-art prerendered graphics system.

Atlantis is not without significant problems, though. Its plot is fairly linear, carrying the player along with the story and denying much freedom for long periods. Even when a crucial decision or puzzle is reached, failure normally results in a 'Game Over' message and the action restarts a scene or so before the critical moment. While this does mean that players won't get halfway through the game only to realise that they missed something vital at the very start, it also tends to make the 'correct' choice fairly obvious in many cases.

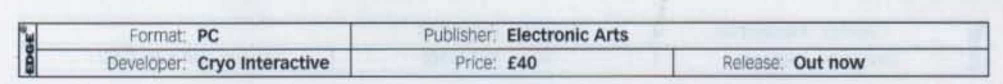
The end result, then, is a rather gentle adventure game that plays something like a less puzzling but better looking – and, significantly, more believable – take on the concept kicked off by *Myst*.

For players hankering after something a little less frantic than the typical 1997 PC release – and who can muster the patience to enjoy the game's relaxed atmosphere – *Atlantis* will provide many hours of enjoyment. It's certainly not a game suited to all tastes, but it successfully achieves its aims.



Edge rating:

Six out of ten



Format: **PC**	Publisher: **Electronic Arts**	
Developer: **Cryo Interactive**	Price: **£40**	Release: **Out now**





The cuts between gameplay and prerendered scenes are so smooth that PC novices might not notice

Ballblazer Champions







The arenas in *Ballblazer Champions* are awash with neon icons, lights and colours, which often makes it tough to see the goals, let alone hit them



Ballblazer's twoplayer option is often frenzied, aggressive and fun, but interest wanes quickly

The futuristic sport sim has, in its entire history, thrown up a mere handful of memorable titles. The classic 16bit *Speedball* series qualifies for inclusion, the *Wipeout* series another, while *Ballblazer*, from the far-off 8bit days, is also fondly remembered.

The concept behind the original title was simplicity itself. Two players, installed in vehicles called 'rotofoils', rushed around an arena chasing a plasmorb (a kind of glowing football). When one craft got close, the ball was magnetically drawn to it, and the player had to then charge toward his opponent's goal and attempt to score. Instead of tackling, his rival simply approached him and pressed the fire button to dislodge the ball from its magnetic grip and put it back into play. Despite the limitations of the gameplay, the game was a lot of fun – significantly so in the twoplayer splitscreen mode.

Ballblazer Champions retains this basic format but introduces weapons, different types of arena and upgradeable ships in an attempt to add both variety and longevity. In some respects these innovations are successful. Weapons, such as missiles, can be used to stun opponents, but they also enable players to shunt the plasmorb around from a distance – a tactic which adds a whole new layer of skill to the proceedings. In addition, the chance to earn rotofoil improvements at the end of each match provides the motivation to keep ploughing through the rounds in order to gain more points.

There are several problems, though. The ramps, bridges and slopes which now crowd most of the arenas can prove irritating, detracting from the sheer pleasure of swishing about the vast open spaces of the original with only the opponent to focus on. The garish hi-res visuals are also distracting, with bouts of prolonged play sometimes leading to nausea as the various icons, shapes and messages blur past. While *Wipeout*'s colour-sodden visuals were workable, here, in a fast-moving multidirectional environment, they can prove repulsive.

Beneath the surface, though, the fundamental addictiveness of the original title remains. The inherent speed and aggression of the gameplay are enough to get most gamers hooked for a while, and some will no doubt find themselves playing through the entire oneplayer tournament to discover new arenas and tougher competitors. However, this is definitely an acquired taste, and although anyone who played the first *Ballblazer* will acquire it relatively easily, others will be left dizzied by the visuals, confused by the over-designed arenas and wondering what all the fuss could have been about in the first place.

Edge rating:

Six out of ten





Many of the arenas feature platforms, ramps and suchlike, but the flat areas are still the most fun



The upgrade screen is a new addition to the *Ballblazer* canon. Its presence is moderately diverting

Format: **PlayStation**	Publisher: **LucasArts**	
Developer: **Factor 5**	Price: **$45 (£30)**	Release: **Out now (US)**

Hexen 64

Nintendo 64 owners appeared to react well to *Doom 64*, Midway's first venture into the field of N64 firstperson shoot 'em ups. The reason was for this is simple: while the game did not offer players much in the way of a new gaming experience per se, it did at least have completely novel level design and a vigorous buffing in the graphics department. Unfortunately, the same cannot be said of Midway's follow up, *Hexen*.

Hexen – the 'Dungeons & Dragons' follow up to *Doom* and *Heretic* – is a poorly resprayed port of the PC original. Level design remains exactly the same, with the famous 'hub' system as mixed a blessing as ever. Players who've indulged in *Hexen* before will be disappointed by this, but even more so by the lack of effort put into the graphical presentation of the game, which, although boasting the N64's customary anti-pixellation filtering, fail to show the hardware off to its potential.

The fourplayer split-screen mode is, of course, the most significant aspect of this N64 conversion. Sadly, while on paper it offers a great deal, it fails within the first few minutes of play. Unlike *GoldenEye*, where Rare has designed specific deathmatch levels and scenarios, players soon find the multiplayer levels here, which are shared with those of the oneplayer game, far too large to play in a player versus player scenario.

Couple this with jerky movement and some lacklustre sprite animation and the N64 picks up another worryingly average thirdparty release.



Edge rating:

Five out of ten







The original version's once-exquisite levels may appear intact in this 64bit translation, but N64 owners will feel cheated by the lack of expansion

EDGE	Format: **Nintendo 64**	Publisher: **Midway**
	Developer: **In-house**	Price: **$70 (£40)**
	Release: **Out now (US)**	

The racing coin-op genre motors on, courtesy of Sega and Taito...

Moto Raid







AM2 has obviously moved on from its ***Hang On*** bike era, bringing 'Akira'-style vehicles to the racing genre









The congestion of the racing game scene has forced AM2 to move out of the modern-day-styled arena. *Motor Raid* adopts a theme that is pure science fiction, with tracks vaguely reminscent of those in *Wipeout*



Racing game tradition dictates that the player is able to select from a number of models

Developer	Sega (AM2)
Release	TBA (UK)
Origin	Japan

With classics like *Out Run* and *Daytona USA* already under its belt, it would have been easy for AM2 to continually churn out similar titles for an eternally grateful audience. However, obviously keen to move away from the realistic contemporary vehicles and believable backgrounds which have inhabited its previous racers, the team has chosen to give its latest adrenaline rush a completely different feel.

This change in direction is most immediately obvious in visual terms. *Motor Raid* looks very much like a cross between anime classic 'Akira' and *Wipeout*, with futuristic icons lining the tracks and brash, colourful design throughout. The circuits themselves are also reminiscent of the Psygnosis racer with huge hills and drops replacing the usual flat urban settings.

The gameplay too represents a shift in direction. Not only has the AM2 team gone for motorbikes instead of swish sports cars (there are five different cycles with varying abilities), but they've also brought in a *Road Rash*-style fighting element. Here, players are able to kick and punch other drivers via buttons that appear to the left of the handlebars. The only problem here, it seems, is that the realistic racing physics so beloved of driving game otaku have had to be simplified to make way for the combat element.

By the standards of a traditionally conservative design team, *Motor Raid* is a significant change in direction, and it will be interesting to see how coin-op fans react to the game. Also interesting is the fact that the title runs on Model 2 rather than Model 3 – a sign either that Sega is keen to continue exploiting older technology, or that hi-tech IGs (image generators) such as Model 3 are still prohibitively expensive. Whatever the case, a rash of sci-fi combat racers should be expected in *Motor Raid*'s wake.

Side by Side 2









This could be the last game from Taito to use its old technology before the company begins to realise titles using its new 3Dfx Wolf technology (see E43)



Taito's game promises to be aimed at experienced arcade racers and as a result the technical nature of the different courses is fairly demanding

Most arcade racing games attempt to attract the widest possible audience by offering a progressive, yet nevertheless accessible, difficulty level. This is obviously the case with Namco's *Ridge Racer* and Sega's *Daytona USA* – as well as making perfect economic sense, of course.

Taito, however, has ignored the lucrative potential of the mass market and aimed its latest coin-op offering, *Side by Side 2*, with its long and technical circuits, straight at the seasoned racer who has presumably mastered the art of powersliding on previous examples of the genre.

Four courses are offered, their background settings based on the seasons of the year, so that players start racing among the sedate, blossom-ridden look of Spring, and progress through the other seasonal changes to complete the game, thereby uncovering the obligatory extra track.

Like other recent racers, the game includes real-life vehicles from Japanese automobile giants such as Toyota, Nissan, Honda and Mazda.

Visually, the game's liberal use of colour proves a stark contrast to titles such as *Rave Racer*, and playability-wise it is far less immediate than Namco's title, offering a somewhat 'rougher', less intuitive ride.

In spite of the lack of originality, *Side by Side 2* should nevertheless appeal to arcade racing fans, and despite its 'narrowed' target audience, it's bound to have its commercial success guaranteed considering the car-related madness evident in Japan. E





Although the game will feature four different tracks, the seasonal setting of each circuit will determine the difficulty of the game's colouful courses

Developer:	Taito
Release:	TBA (UK)
Origin:	Japan

Gallery

Edge dips into the world of CGI once more, revealing the stunning work from the artists of a newly formed UK-based codeshop plus the efforts of the rapidly increasing band of Japanese exponents





Eight months in development and still unfinished, Particle System's intro sequence to forthcoming title *I-War* is a breathtaking mix of cinema sci-fi and realistic physics. Although space scenes can look remarkably barren, the artists responsible here have spent weeks playing with lighting effects, shadowing and intricate detail to create an interesting visual. The most eye-catching effect, though, is the huge blue planet in the background of the main picture. 'To achieve this realistic earth image,' note the artists, 'the scene was split up into two elements. The background uses a modified NASA photo as a basis for a texture map applied to the planet. The foreground consists of the spaceships composed with lighting cues taken from the background element. We spent a lot of time experimenting with lighting the scenes to make sure we had the right atmosphere.' From the evidence here, it would appear that they have succeeded.

Matt Clark, Michael Todd and Andy Turner used Newtek's *Lightwave 5.0* running on a Pentium Pro 200MHz with an average of 96Mb of RAM for all of the game's CGI sequences. All frames were rendered at night on Particle Systems' machines using the company's custom *Renderform* software.


NAVY













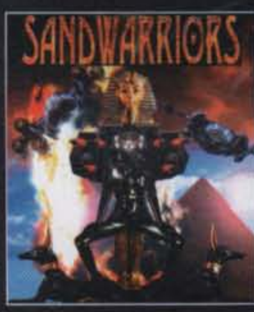
'The themes that fascinate me are bio-technology, sex and terror,' points out artist **Steve Stone**, who recently provided the box artwork for Gremlin's sci-fi flight shoot 'em up, *Sand Warriors*. These diverse themes are more than evident in this startling collection of work which takes in the erotic bio-mechanical art of Giger and the diversity of Terry Gilliam – two of Stone's main influences. The former, however, is perhaps the most powerful inspiration for Stone's mix of spiritual (Buddha and the sphinx) and futuristic imagery. As he states, 'The foundation in any artist's life comes out of one powerful encounter, and then you follow the trail. For me that was encountering the work of HR Giger. His work is summed up in two words: terror and beauty. These are usually two forces that are kept separate, but for me they are sisters. I have no interest in a pretty or quaint beauty.' It certainly shows.

Stone created these images using a combination of *3D Studio Max*, *Photoshop* and *Lightwave* (for basic modelling). He and co-worker Martin Akers use dual P166s with 128Mb of RAM each, 5Gb hard drives and Matrox Millennium graphics accelerators. Both PCs run *Windows NT*








SANDWARRIORS





The passion for mechanised mobile suits in videogames seems certain to continue to permeate the scene thanks to the likes of Sega's *Virtual-On* and all manner of obscure titles destined never to see the light of day outside of their prime breeding ground, Japan.

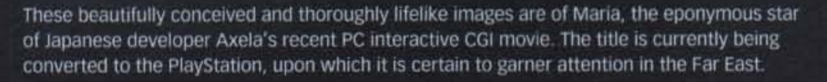
Guy Brave is one such title, a PlayStation RPG from development house Axela featuring models chiefly inspired, it would seem, by the Japanese manga and anime 'Gundam' series.

This image, which was put together without the use of a traditional 3D rendering package, is typical of Japanese game-promotion artwork – both distinctive and atmospheric.









These beautifully conceived and thoroughly lifelike images are of Maria, the eponymous star of Japanese developer Axela's recent PC interactive CGI movie. The title is currently being converted to the PlayStation, upon which it is certain to garner attention in the Far East.











Ruined gothic buildings, rampaging knights, mist-laden cemetaries: these images from Square Soft's PlayStation title *Final Fantasy Tactics* capture the eerie atmosphere so often associated with RPG titles. The studied use of lighting and shadows accentuates this sinister aura.

Sonic Jam

Sega's 'new' *Sonic* title for the Saturn is almost ready to roll, collecting all four 16bit platformers and decorating them with a 3D 'Sonic World' front-end in which Sonic explores a world packed with trivia, video clips, soundtracks, and lush 32bit visuals.

While the package is not even attempting to be the true 32bit update to Yuji Naka's subliminal gameplay experience, it's sure to prove an interesting run, jump, and spin down memory lane nevertheless, especially with early adopters of Sega's seminal 16bit Mega Drive system.

The four 16bit classics (*Sonic the Hedgehog*, *Sonic 2*, *Sonic 3*, and *Sonic and Knuckles*) are just about Mega Drive-perfect, and all can be enhanced with the Lock-On upgrade offered late in the series.

Of the four games, the original *Sonic* offers perhaps the most solid (but nevertheless nostalgia-tinged) play, while *Sonic and Knuckles'* twoplayer mode proves to be an entertaining experience.

However, it's doubtful that many Saturn owners out there will have no experience of at least one 16bit *Sonic* game, and to those there may not be much in *Sonic Jam* to warrant interest, despite the admittedly pretty 3D sections and hotchpotch of bonus bits.



Ballblazer

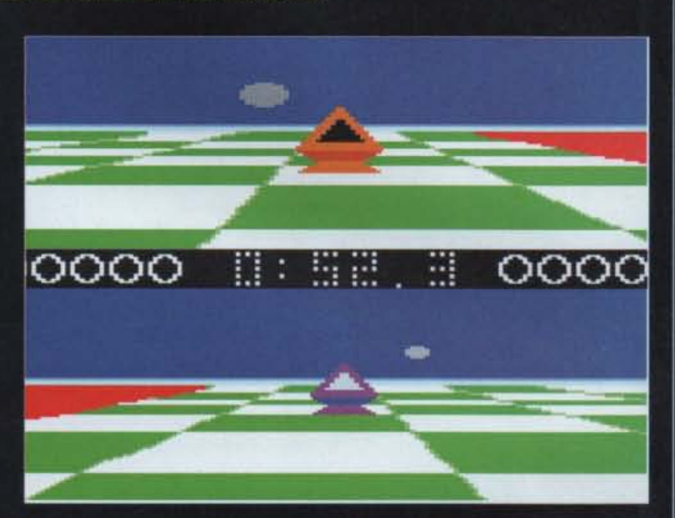
A version for the PlayStation may now be available, but many would argue that 8bit simplicity was one of 'blazer's strengths

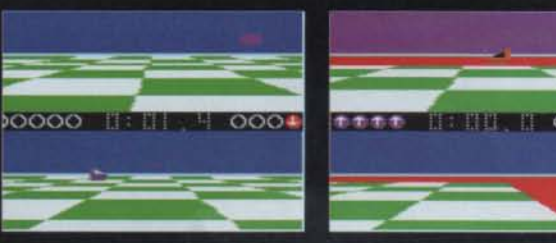
When LucasArts released *Ballblazer*, the company was at its experimental nadir, producing interesting and unusual games at a swift rate. Space actioner *Rescue on Fractalus* and surreal adventure *The Eidolon* were its stablemates, each inventing its own rules, confirming to no preset genres.

Ballblazer, in its 1985 form, could never happen now. With one arena and only one craft, the game lacks the huge variety of options which characterise software nowadays (see, for example, the range of choices available in *BB Champions*, p86). But the pure, fast and frantic gameplay – a sci fi mix of football and air hockey – struck a chord with a mid-'80s audience tiring of flick-screen platformers and poor arcade conversions. Plus, its twoplayer splitscreen option, like those of *Pit Stop II* and *Spy vs Spy*, added a confrontational mode of play which accounted for the game's popularity.

In playing *Ballblazer* today it's difficult to objectively assess the impact the game made when it was first released. The sci-fi sports sim is still around, of course, but has almost become a tiresome parody of itself.

Twelve years ago, all it took to invent a new sport was a chequerboard, a magnetic ball and two ultra-fast vehicles. How much have gamers truly gained in the interim?





Publisher: LucasArts	1986	No 18
Developer: In-house	C64	

Sega System 16

Though most emulators can only handle fairly crude coin-ops, this effort presents a range of Sega's hits from as recent as '89

Although the number of old arcade games playable via free emulators now stands at around 150, most of the games emulated date from the earliest days of coin-op history. Making a major leap towards the present day, though, is Thierry Lescot's *Sega System 16 Emulator*, which currently plays five Sega coin-ops from the late-'80s era (*Shadow Dancer*, for example, was as recent as 1989), but which also has the framework in place to cope with many more (*E-SWAT*, *Alien Syndrome*, *Bonanza Bros*, etc).

Sega really started to hit the big time in the '80s, with games featuring colourful graphics coupled with simple, addictive gameplay that sucked up 10p pieces in their millions, and paid for the hydraulic projects that followed (*Space Harrier*, *Out Run*, *Afterburner*, etc).

With the exception of *Time Scanner*, a likeable and inventive pinball simulation, all the games here play in much the same manner. *Shinobi* and its sequel *Shadow Dancer* give the player weapons and feature platforms, whereas *Golden Axe* and *Altered Beast* are more straightforward in gameplay terms.

Shinobi is definitely the best of the bunch, stealing gameplay ideas from Namco's *Rolling Thunder* and presenting them in a chop-socky environment whose slick playability, level designs and bosses make for an extremely addictive game.

The emulation of every game is impressive, though, and extremely promising for the future (although financial constraints on the author have placed the development of the emulator itself in considerable doubt). Though gamers will need a heftier PC than for most of the other arcade emulators, an entry-level P100 will still provide full speed, sound and joystick support for most games.

Visit http://www.xs4all.nl/%7Edelite/ to download this impressive emulator.







Format:	PC
Publisher:	n/a
Developer:	Thierry Lescot
Release:	Out now (internet)
Origin:	Belgium











System 16 **emulates (from left)** ***Altered Beast, Golden Axe, Shinobi, Shadow Dancer*** **and** ***Time Scanner*** **– although the latter title requires users to turn their monitors on their sides**



Virtually Unlimited's *3DGM* demo reveals the kind of results game designers can expect from the package

Virtually Unlimited is also keen to stress the flexibility of the technology. For example, *3DGM* uses a layered structure, like Direct 3D, which offers both a 'retained' mode (for maximum simplicity) and an 'immediate' mode. The latter allows programmers to customise the 3D engine at a low level with their own code – potentially enabling them to increase its polygon-pushing performance. (Using retained mode is usually slower as it deals with shaded shapes rather than raw polygons.) An added bonus is that *3DGM* is compatible with 3Dfx's Voodoo chipset, with the result that any game developed using the package is able to call on a huge range of effects.

Whether *3DGM* will be able to find a substantial, secure market is open to question, though. Both Direct3D and 3Dfx's own *Glide* API offer the basics of a 3D engine for programmers to work on, and it is possible that *3DGM* will simply add an extra layer of administration that slows games down. However, if the product offers a level of performance to match its ease of use, it could be the answer for developers who either don't have the resources to develop their own engines or wish to avoid the substantial risks in terms of time and expense which are inherent in the process. Until now, that is...

Places to visit:
The *3DGM* demo shown above, as well as other information about Virtually Unlimited, can be found on the company's website at http://www.virtually3d.com

Softimage part deux

With a decade at the leading edge of 3D animation behind it, Softimage is touting *Digital Studio* as its architecture for the next ten years. The product is currently in its final beta cycle and is slated for an NT release in September. The initial version is targeted at the high-end and non-linear editing market, with a more 'games friendly' edition following soon after. No decision has yet been made on an IRIX version, though if SG's Octane unit is successful, that situation could soon change.

'One of the main goals of *Digital Studio* is to make the tools and the media types inconsequential to the creative mind of the content producer,' company chief **Daniel Langlois** has been quoted as saying. 'It's like being in one big room where you can reach up on a shelf and grab whatever digital media tool you need – paint brush, special effects filter, animation tool – and simply apply it to images, audio, 3D scenes, whatever, without thinking about what software you're using or what media you're handling.'

While many muttered darkly about Microsoft's acquisition of the company, it is doubtful whether Softimage would have managed to pull off *DS* in quite the same manner without Bill Gates' outfit. The relationship has yielded other benefits, too. For example, Softimage's level of access to the code of the NT OS undoubtedly helped it in effectively porting most of its current range to NT (doubling sales as a result), and feedback channelled to Microsoft via Softimage from the leading games houses has helped mould forthcoming versions of Microsoft's DirectX APIs.

With these well-established links, the company has become adept at forecasting trends in the games field, and Langlois provides an intriguing hint of the shape of things to come: 'The thing that will be interesting to see is that in game evolutions, especially in the PC field, people are starting to allow consumers to actually create their own animations and create their own models. One of the things that we want to make sure of is that we're going to have a way to support actually packaged behaviours with models. Packaged behaviour will include animation, type of action and reaction depending on circumstances, specifically for this new generation of game, and I think that that's what we're going to see. People are looking for new ways to get interested, and one of the ways is to participate in the game themselves by creating new levels. We're actually going to provide tools for the people creating that content so they can deliver models that can be changed by consumers.'

Langlois' reasoning is that PC developers have to think carefully about what they can do to differentiate themselves from what is on offer on dedicated platforms. Given the success of games like *Quake*, it's certainly a compelling argument. He has other predictions as well – for example, that NURBS will become a consumer product in much the same way that polygons are now, and that 3D will be compressed over the Internet and rendered on the fly on domestic machines. Whatever happens, though, the company's hope is that *Digital Studio*'s open architecture will allow it to successfully track the market's evolution over the next ten years.



***Digital Studio* is set to offer a complete suite of digital media tools to the professional designer**

FROM THE LION'S MOUTH

Peter Molyneux, former Bullfrog supremo and now head of Lionhead, reports for Edge from his first E3 as a new developer...

As any new developer will tell you, E3 is a mixed blessing – on one hand you're excited about what you're going to see, but on the other you're scared that other people's games are going to blow your own stuff away.

While everyone was glibly saying that their new product would be runnable on the next generation of accelerator cards, what they didn't seem to realise was that each time a new card comes out for the PC, it's the equivalent to the release of a new machine. The only theoretical bridge between these is DirectX. Unfortunately, a lot of developers I spoke to were talking about the features of a particular card, therefore bypassing all the support that DirectX can offer, so it's unsurprising that there were some visually stunning games on display, but for me, still a sad lack of original concepts.

There were 900-plus products on show, but I couldn't help wondering how they were ever going to make money. There seemed to be sequel after sequel and clone after clone. What people don't seem to realise is that well-designed and original games sell, so titles like *Sim City*, *Myst*, *C&C* and *Doom/Quake* must account for a disproportionately high amount of sales. PC titles with that kind of potential included Hasbro's *Heads*, Bungee's *Myth*, and, now I'm no longer at Bullfrog, *Populous: The Third Coming*.

On the console side, my overriding impression was that a lot of people were spending a lot of money that they didn't have, and that you had to respect companies like EA for producing so many great products. As a developer I felt very scared by the amount that graphics have leapt forward in the past year, but excited to see that there are still masses of opportunities.

(viewpoint)

EXPRESS YOURSELF IN EDGE – WRITE TO: LETTERS, EDGE, 30 MONMOUTH STREET, BATH, BA1 2BW

Cancelled or 'delayed'?

In E47 it was revealed that the Matsushita M2 console project had been cancelled, claiming that **Edge** had received news of the cancellation at the end of May 1997. But on June 11 1997 Matsushita Japan issued an official statement denying Japanese press reports that it was scrapping the M2 home console project. The statement declared that the system is ready and that ten games have already been completed. It went on to imply that only the commercialisation of the system had been delayed.

Matsushita's statement came in the wake of a story in Japanese industrial daily the *Nihon Kogyo Shimbun*, which claimed the machine was to be scrapped and that Matsushita was to shut down its home console wing. The story also claimed that Matsushita realised that M2's competition would be too tough.

Could the news of the M2 cancellation in E47 be wrong? When a couple of weeks after **Edge** received news of the M2 cancellation, Matsushita issued a statement contradicting this. Could it be that the M2 project has not been cancelled, but delayed to make the M2-based box more powerful? Matsushita could add more RAM, speed up the processor, etc, so that it can be released in about a year's time and fight the PlayStation 2 and Saturn 2? E47 did reveal it had heard rumours that Matsushita was working on a console, with higher specifications than M2, which included DVD and Internet connectivity. Could this be the M2 hardware getting a power-up? If not the M2 hardware could it be the M3?

A Matsushita merger with Sega could be another possible reason for the M2 delay, so that Sega can provide M2 with software.

**Osman Ahmed,
Woking, Surrey**

Don't be mislead by postings on the Internet. Most rumours about the demise of the M2 project have emanated from gossiping developers, but **Edge**'s confirmation of the cancellation came from sources directly involved with the development of the console itself. Because an M2 launch was never officially announced in Japan, Matsushita's official company line is one of playing down an abandoned project and preferring instead to use the term 'delayed'. This strategy is likely to have been chosen so that confidence in a future Matsushita videogaming initiative isn't weakened.

M2 as it currently stands, though, has been scrapped and a future project is more likely to be borne out of the experience gleaned from the project, rather than simply turning up the heat on existing technology.

Raging racer

On June 13, when *Rage Racer* was released, I was one of the first in line to buy a copy. The game had everything I hoped for (*Wipeout 2097* on wheels!), featuring stunning speed combined with mean courses and bags of atmosphere – not to mention the upgradeable cars. I am completely hooked.

While queuing up for the game, I saw the demo of *Rage Racer* being played next to another screen showing *Super Mario Kart 64* (released the same day), which was also on rolling demo. The Nintendo game looked so pathetic in comparison it was laughable, with barren courses and slow cartoon-style graphics. The only thing going for it is its multiplayer facility (although, I must ask, how easy is it to drive when looking at stamp-sized screens?). The game itself has not progressed since the SNES version, except perhaps with its multiplayer options and the ability to drive through tunnels (steady on, Nintendo, don't risk overdoing it).

Do you really need a 64bit machine to achieve this? This is hardly the quantum leap promised by the hype regarding 64 versus 32 or even 16bit machines. Like many other people, I was really excited when the Nintendo system was announced. But when are we going to see something that actually pushes the machine?

**Jasper Manchipp,
via email**

Until a truly outstanding racing game comes along for the Nintendo machine *Super Mario Kart 64* is bound to suffer unduly when placed next to the sheer speed and visual punch of Namco's thoroughbred racer. Indeed, **Edge** concedes that *SMK64* and other N64 titles do fall well short of the promises made by Nintendo in the pre-launch hype period. But outside of the racing genre, few could deny that titles such as *Starfox*, *Blast Corps*, *Turok*, and this month's stunning *GoldenEye* represent a clear progression from 32bit. And this is something accentuated by Rare's stunning E3 duo of *Conker's Quest* and *Banjo-Kazooie*.

Compared to PlayStation development, N64 coding is clearly in its infancy and just as Sony's machine is finally being pushed beyond its current performance benchmark, no doubt coders will take the 64bit machine to mind-blowing new levels in the not-too-distant future.

Keeping it covered

I'd just like to respond to Nicholas Stoker's letter (E47). I say bring on the cover-mounted gifts (providing they're the same size or smaller than the mag). The CD-ROM was excellent. Also, if he wants a plastic bag (what does he do with them?), get **Edge** on subscription – you get a nice red bag with a shiny black lining!

**Ben Mullinger,
via email**

A tale of CD woes

After being a loyal follower of **Edge** over the years I was very pleased to hear about your upcoming cover CD. So when your new issue arrived in my local newsagents I purchased the issue asap and returned home, only to discover to my shock that the CD would only work with *Win95*! Although all of the .mov files were viewable I was still disappointed with your lack of provision of 16bit and 32bit .exe files.

I realise that **Edge** deals with the cutting-edge of tech, but you should still provide us users of DOS and *Win3.11* with proper access to your cover CDs. I hope in the future that you will provide a 16bit .exe file just like all other Future Publishing PC magazines do. By the way, the CD audio track is great!

**David Bandey,
via email**

Sincere congratulations

Sincere congratulations and thanks are in order for your superb cover CD. It is perhaps the first I have encountered, out of hundreds, that truly did not waste a single byte of the disc.

**Mark Lawton,
via email**

Interactive suggestions

I enjoyed the **Edge Interactive** CD, but feel that the following additions could make the second one, whenever you release it, even better:

- Game demos. Yeah, a predictable suggestion, but only include a few of the best ones. PC mags have CDs overloaded with substandard, play-once demos, so avoid doing that.
- Text files. Wouldn't a few of the latest FAQs be a great little extra? They'd barely take up two megabytes of the CD.
- Emulators. Just the emulators, mind you – the ROM images are illegal to distribute. Myself and many others would rather get emulators off a CD than triple our phone bills downloading the whole programs from the Internet.
- Gallery piccies. Try to fit 'em on next time.

Well, thanks for providing me with a great monthly read, and others with the best games magazine on the market, with or without CDs.

**Andrew Crane,
via email**

Thanks for the feedback and suggestions. **Edge** has looked into the possibility of providing interactive demos of PC and console titles, but unfortunately a disc that works on all formats (N64 excepted for obvious reasons) isn't feasible. **Edge** has no immediate plans to introduce playable PC demos on its next disc. Apologies to those who experienced problems running the disc but a high PC and Mac minimum spec was necessary to keep a high standard of presentation throughout.

Character building

In recent years, the differing approaches to game design by software companies in the East (notably Japan) and the West have been ▶

(viewpoint)

highlighted by some landmark titles. More often than not, these titles have also served to accentuate the deficiencies in Western products.

For example, characterisation (in the sense of defining and sculpting the game characters) has continued as a fundamental basis for many Japanese games, and yet it is often neglected in the West. Without this essential foundation of solid characters, many Western products have been stripped of any individuality or defining identity. Thus, all too often they become a mere exploration of interconnected screens as opposed to a tangible entity that supports itself.

For the Japanese, reality is not necessarily the key. Indeed, many of the best characters of Japanese software (Cloud Strife, Heihachi, or Vega, for example) rely on the fact they are fantastical. However, they still exist as credible individuals within the worldscape defined by the game. As a result, the game establishes itself as an experience which can give as well as take. It is not even necessary for the player to need to become heavily involved with the character, as he would (for example) in *Final Fantasy VII*. As long as the character is fully rounded – moves idiosyncratically, wears clothes for a reason not just because of a palette choice, and reacts in a consistent way – the illusion is created, and he or she imposes a convincing identity on the game.

Nick,
via email

Edge has long campaigned for decent character design, and this is one of the reasons why Japanese titles feature so prominently in the magazine. Japanese design hallmarks are traditionally imaginative, offbeat, and rarely suffer from the contrived Western notions of what makes an appealing character (reversed baseball caps and shades, for example). Possibly this has much to do with cartoon-style characters having a greater importance in Japanese culture and Japanese designers consequently having a firmer grasp of the essentials of character design. Which probably explains why there are ten Western game characters with the design sensibilities of the *Zool the Ninja Ant* (from the nth dimension) for every *Sonic the Hedgehog*...

Edge is planning an in-depth analysis of this very topic in a forthcoming issue.



Too PC

Am I the only person that has noticed a bias towards the PC in your magazine? Do you think that everyone has got either a PC, PlayStation or Nintendo 64?

Wake up! Some of us own Macs and Amigas. You had a perfect way of finding out which home computers your reader own with the reader survey, but the questions are worded 'Do you own a PC?' not 'Do you own a home computer? If yes, which type?'. Then it says 'Which of these games consoles do you own?' and then lists the Amiga in the list of consoles. The Amiga is only just being caught up with as the best computer for broadcast-quality graphics. Only one new game has been released this year, but that's only three less than the N64.

Your article on emulation is another example of your bias. You mention the websites where you can find the PC versions of the emulators, but not the Mac and Amiga sites. Why? Could you not be bothered to find them out?

Unless this bias stops soon I will stop buying your magazine and start buying one that gives full coverage to all computers, not just one.

Gary Pearson,
via email

Retro emulation sites that serve the Macintosh pretty much come down to the one that was detailed in **E**46 – The Macintosh Emulation Homepage at http://www.emulation.net.

As for the issue of PC bias (déjà vu, anyone?), **Edge** is simply reflecting that the machine has truly come into its own as a powerful gaming platform. The Amiga on the other hand, while still popular as a cult home computer, hardly figures in state of the art videogaming which is **Edge**'s primary focus.

Incidentally, **Edge** will not enter into any correspondence relating to feedback along the lines of 'Do you realise that if you stick a stinking great processor in an Amiga it is in fact more powerful than a Pentium PC, etc, etc.'

Everyone's dropping them

Having owned practically every major console created in the last ten years, I have finally learned my lesson. The best plan is not to rush and by the hottest thing on the market (right now the N64), but sit back and wait for prices to drop.

What with the current trend of retro-gaming and the fertile budget PC market, I consider my situation a fortunate one. Having been slightly disheartened over the past six months due to the lack of triple-A (or even double-A) software for the PlayStation, I thought my only alternative was to fork out £150 for an N64 plus £60 per hit for the games. However, since browsing through **E**46 my mind was changed by the upcoming releases for the machine which seem, to me at least, to be up there with the leading N64 software.

What with just obtaining a modem for my lacking P120, I plan to spend the next year playing on emulated spectrum games, and *Little Big Adventure* and *Magic Carpet* (£10 each). The money I save will leave me with more than enough for the few expensive classics that come along, such as *X-Wing vs TIE-Fighter* and, hopefully, *Metal Gear Solid*, *Overboard* and *Colony Wars*. The future is almost here and, even without an N64, I'm going to enjoy every minute.

James Holloway,
via email

The good old BBC

With regard to **E**45's Love Resurrection feature, I can't believe that you've forgotten about the good old BBC Microcomputer! My brother had one, and it had some really cracking games for it! For example, the original *Elite* by David Braben, the racing game *Revs* (I think by Geoff Crammond?), the brilliant *Repton* series of games, an excellent version of *Galaga*, and many more.

It had the best basic language of any computer at that time as well, with superb peripheral expandability. Oh yeah, and Acorn is still around today (www.art.acorn.co.uk), unlike some other manufacturers I could mention. For BBC resources try:
http://www.ncl.ac.uk/~n5013784/bbc-emu.html
http://www.idt.unit.no/~robert/bbc/bbc.html
http://www.cistron.nl/~wouters/bbc/bbc-etc.html

Michael Ho,
via email

Thanks for the site listings. **Edge** apologises for the omission of the BBC Micro from its recent emulation features – it was an unfortunate oversight. The machine did indeed play host to a number of classic games (*Elite*, *Starship Command*, *Exile* etc), and served as the valuable introduction for thousands of home computer users to the hobby via its popularity at schools and colleges.

Wide boy

I was interested to read your comments on the widescreen TV in the nuMedia section of **E**46. You describe how marvellous playing games is on a 28-inch widescreen TV. I find it interesting, though, that you say this as you consistently criticise any developers who include black borders in their games. I prefer games with black borders as they dsiappear in widescreen mode.

Lee Feder,
Telford, Shropshire

The black borders that **Edge** berates so much are usually the result of a hasty conversion from NTSC to PAL due to the increased number of horizontal scan lines on UK PAL TVs. Developers can minimise this but unfortunately, these borders are usually accompanied by slow-paced gameplay, too. Widescreen TV owners may be able to put up with this, but Edge doesn't.

(QandA)

WRITE TO Q&A, EDGE, 30 MONMOUTH STREET, BATH, BA1 2BW

Q I have the following questions concerning Nintendo's 64DD:
1. How much do you estimate the system will cost?
2. Will you have to buy extra RAM separately, or will it come built-in?
3. Nintendo says that 64DD will have modem capabilities. Does this mean it will have an actual modem in the unit?
4. Also on the subject of modems, will Nintendo set up its own Nintendo gaming network?
5. Will any Nintendo fan be allowed to have their own 'websites', thus meaning we will be able to download new characters, levels, or teams on to 64DD cartridges?

Alex Tew, via email

A **1.** Nintendo hasn't officially released a price for the 64DD, although it has hinted that it wants the unit to be extremely affordable – at least in its domestic market where it's thought that the system could retail for as low as ¥10-15,000 (£50-75). In the UK it's unlikely that such a system would retail for anything less than £100, but it's really too early to speculate.
2. The unit is supposed to be shipping with 4Mb of RAM built into the system and additional RAM carts are planned to be made available if and when more memory is needed.
3. Possibly, and if the company is preparing to allow its game players to expand their game titles via downloadable data, it would make perfect sense for Nintendo to make modem facilities as standard in the 64DD. Quite what effect this would have on the cost of the device is obviously the most important issue that Nintendo will need to consider.



4. The company has hinted at this and it seems highly likely.
5. Less likely, but sadly unofficial hacker sites packed with 64DD files are bound to arise if the technology permits.



Q I have a PC166 and I'm thinking about buying a 3D card. How much difference will a 3Dfx card make to my games and is it still a safe bet?

Neil North, Melbourne, Australia

A When the Voodoo card is supported by developers – something which has recently gone into overdrive (see News) – it does make a substantial difference to the frame rate of a game, usually sustaining it at 30fps at 640x480, instead of the dreadfully jerky 15fps average of most PC games. When the card is written to using the company's Glide API instead of Direct3D or OpenGL, even higher performance is possible and 60fps is attainable, as seen in *Pod* and – even more dramatically – in *Powerslide*. Currently, there are almost 200 3Dfx games in development, and the company has said it doesn't intend to introduce a more powerful model until next year. This is as safe as it gets in the PC market, but nothing is assured.

Q My TV is not NTSC and I want to get an American Nintendo 64. What do I have to buy to make it work on my TV?

Dom Barnet, via email

A You haven't said if your TV has a SCART socket because the only option is to get your machine converted (most importers will do this as standard) so it can output an RGB SCART signal. If you don't have SCART, there are PAL convertors to consider but be prepared for a noticeable drop in picture quality.



The movie has been hailed as one of the greatest ever made, its popularity in the sci-fi genre eclipsed only by the 'Star Wars' trilogy. The 1995 release of 'The Director's Cut' was seen by three times as many cinema-goers as the original. In issue 49, Edge flies out to Las Vegas, where the jewel in Virgin's crown, Westwood Studios, is working on what ranks among the most eagerly anticipated games of the decade: *Blade Runner*

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